Drinking Water Surveillance Program

METRO TORONTO (R.C. HARRIS) WATER TREATMENT PLANT

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METRO TORONTO (R.C. HARRIS) WATER TREATMENT PLANT

DRINKING WATER SURVEILLANCE PROGRAM

ANNUAL REPORT 1988

JANUARY 1990

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EXECUTIVE SUMMARY

DRINKING WATER SURVEILLANCE PROGRAM

METRO TORONTO (R. C. HARRIS) WATER TREATMENT PLANT 1988 ANNUAL REPORT

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. Currently, 52 plants are being monitored.

The Metro Toronto (R. C. Harris) Water Treatment Plant is a conventional treatment plant that treats water from Lake Ontario. The process consists of coagulation, flocculation, sedimentation, filtration, disinfection and fluoridation. This plant has a design capacity of 1000 x 1000m3/day and in conjunction with the R.L. Clark and Easterly plants, serves a population of approximately 2,333,000 people.

Samples from the raw and treated water were taken on a monthly basis. Two distribution system sites were selected to be sampled on a monthly basis, one discontinued sampling in March and the second was not sampled for several of the summer months. Parameters were divided into the following groups: Bacteriological, Inorganic and Physical (Laboratory Chemistry, Field Chemistry and Metals) and Organic (Chloroaromatics, Chlorophenols, Pesticides and PCB, Phenolics, Polynuclear Aromatic Hydrocarbons, Specific Pesticides and Volatiles). Specific Pesticides and Chlorophenols were analysed in June and November only.

A summary of results is shown in Table 1.

Inorganic and Physical parameters were below any applicable health related ODWOs.

Of a total of approximately 110 Organic parameters tested for on a monthly basis, none exceeded health related guidelines.

During 1988 the DWSP sampling results indicated that the R. C. Harris Water Treatment Plant produced good quality water at the plant and this quality was maintained in the distribution system.

TABLE 1

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP)

SUMMARY TABLE BY SCAN

SCAN	RAW			TREATED			SITE 1			SITE 2		
	TESTS	POSITIVE	%POSITIVE	TESTS	POSITIVE	%POSITIVE	TESTS	POSITIVE	%POSITIVE	TESTS	POSITIVE	%POSITIVE
BACTERIOLOGICAL	44	36	81	49	11	22	8	1	12	25	3	12
CHEMISTRY (FLD)	36	36	100	72	72	100	18	18	100	70	70	100
CHEMISTRY (LAB)	246	201	81	244	178	72	54	43	79	251	215	85
METALS	288	161	55	288	144	50	71	43	60	329	198	60
CHLOROAROMATICS	168	0	0	168	0	0	28	0	0	98	0	0
CHLOROPHENOLS	12	0	0	12	0	0	.	.	.	.	.	.
PAH	204	0	0	204	0	0	.	.	.	.	.	.
PESTICIDES & PCB	396	0	0	396	0	0	64	0	0	230	0	0
PHENOLICS	12	2	16	12	3	25	.	.	.	.	.	.
SPECIFIC PESTICIDES	56	0	0	56	0	0	0	0	0	0	0	0
VOLATILES	316	1	0	286	43	15	58	9	15	174	22	12
TOTAL	1778	437		1787	451		301	114		1177	508	

NO HEALTH RELATED GUIDELINES WERE EXCEEDED

A POSITIVE VALUE DENOTES THAT THE RESULT IS GREATER THAN THE STATISTICAL LIMIT OF DETECTION AND IS QUANTIFIABLE
A '.' INDICATES THAT NO SAMPLE WAS TAKEN

DRINKING WATER SURVEILLANCE PROGRAM

METRO TORONTO (R. C. HARRIS) WATER TREATMENT PLANT
1988 ANNUAL REPORT

INTRODUCTION

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. Currently, 52 plants are being monitored.

The DWSP was initiated at the R.C. Harris Water Treatment Plant in January of 1986. Annual reports were published for 1986 (ISBN 0-7729-2555-0) and 1987 (ISSN 0839-8941).

This report contains information and results for 1988.

PLANT DESCRIPTION

The Metro Toronto (R.C. Harris) Water Treatment Plant is a conventional treatment plant which treats water from Lake Ontario. The process consists of coagulation, flocculation, sedimentation, filtration, disinfection and fluoridation. Superchlorination is used for disinfection and for taste and odour control. Sulphur dioxide is used as a dechlorinator and ammoniation is used to

produce a long-lasting chloramine residual in the distribution system. This plant has a rated capacity of 1000 x 1000m3/day and daily flows on sampling days ranged from 468 x 1000m3/day to 799 x 1000m3/day. R.C. Harris in conjunction with the R.L. Clark and Easterly plants, serves a population of approximately 2,333,000 people.

The plant location is shown in Figure 1. Plant process details, in a block schematic, are shown in Figure 2. General plant information is presented in Table 2.

METHODS

Water samples were obtained from four DWSP approved locations;

i) Plant Raw - The water originated from the raw water wetwell prior to chlorination and was sampled through a copper sample line. The sample tap is located in the plant laboratory.

ii) Plant Treated - The water originated from the John Street Tunnel after addition of all treatment chemicals and was sampled through a copper sample line. The sample tap is located in the John Street Tunnel.

FIGURE 1

DRINKING WATER SURVEILLANCE PROGRAM

SITE LOCATION MAP

R.C. HARRIS WATER TREATMENT PLANT

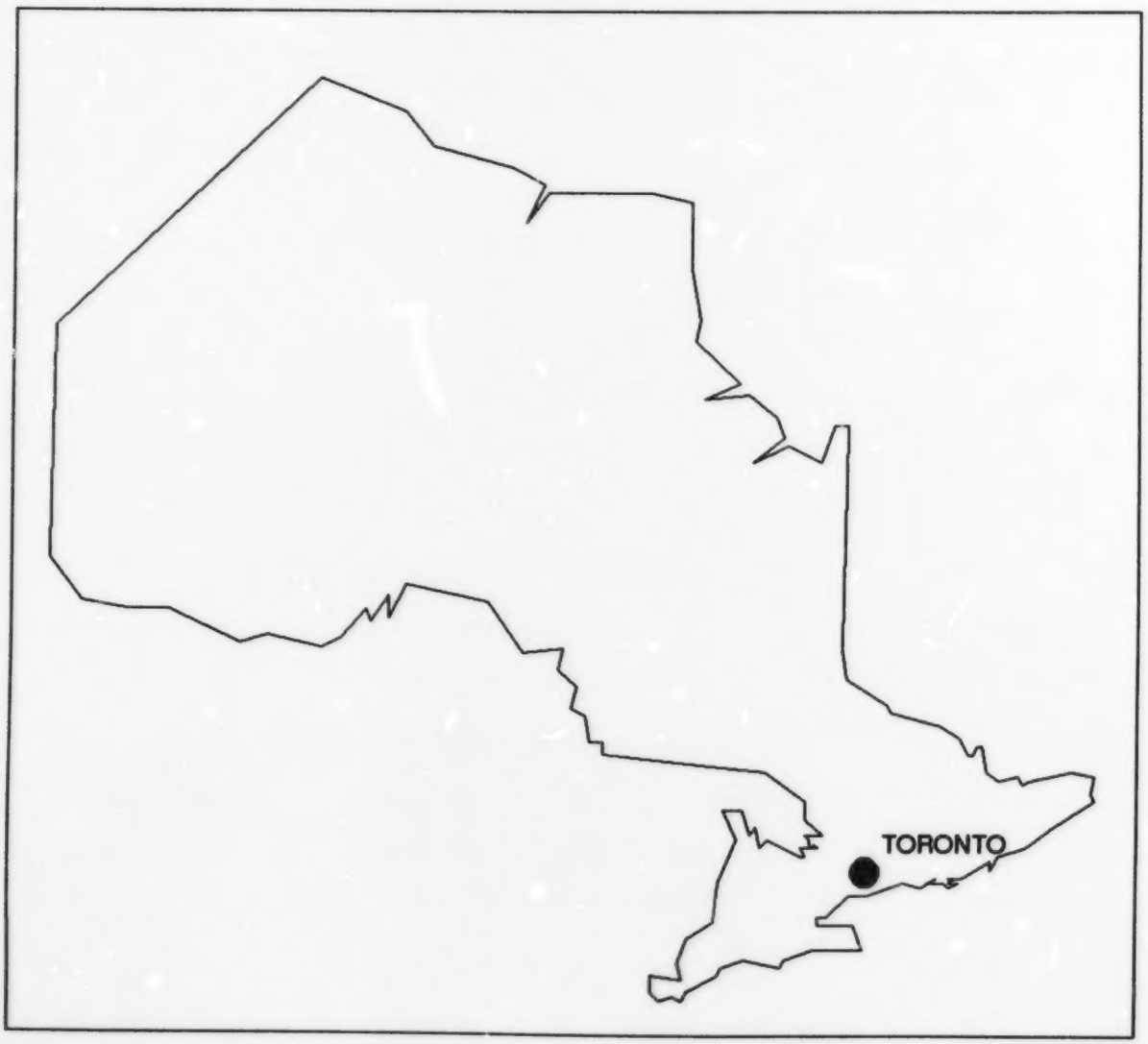

Figure 2

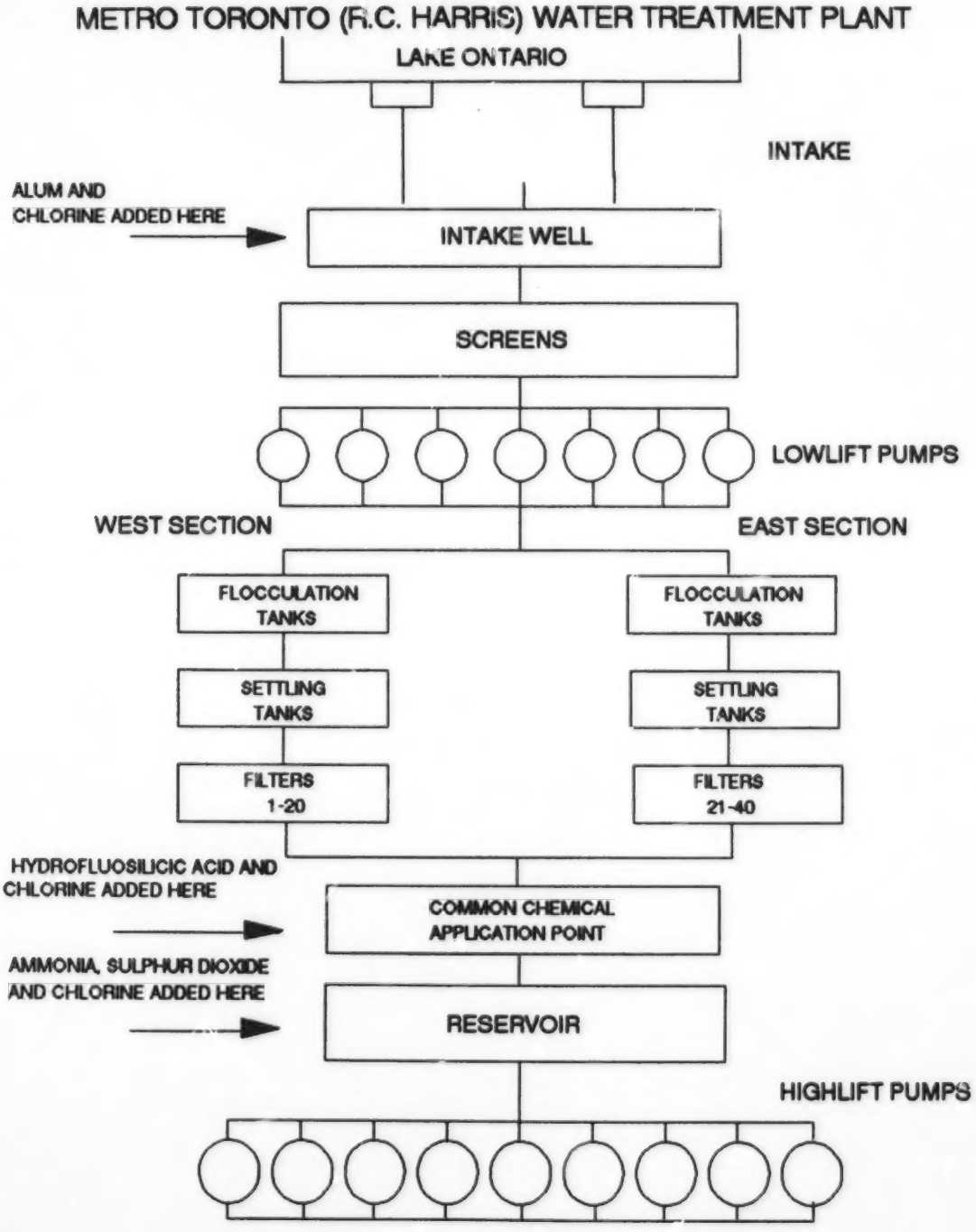
METRO TORONTO (R.C. HARRIS) WATER TREATMENT PLANT
LAKE ONTARIO
INTAKE
ALUM AND
CHLORINE ADDED HERE
INTAKE WELL
SCREENS
LOWLIFT PUMPS
WEST SECTION
EAST SECTION
FLOCCULATION TANKS
FLOCCULATION TANKS
SETTLING TANKS
SETTLING TANKS
FILTERS 1-20
FILTERS 21-40
HYDROFLUOSILICIC ACID AND
CHLORINE ADDED HERE
COMMON CHEMICAL APPLICATION POINT
AMMONIA, SULPHUR DIOXIDE
AND CHLORINE ADDED HERE
RESERVOIR
HIGHLIFT PUMPS

TABLE 2

DRINKING WATER SURVEILLANCE PROGRAM ANNUAL REPORT

GENERAL INFORMATION

METRO TORONTO (R.C. HARRIS) WATER TREATMENT PLANT

LOCATION:	2701 QUEEN STREET EAST TORONTO, ONTARIO M4E 1J1 (416-392-2932)
SOURCE:	RAW WATER SOURCE - LAKE ONTARIO
RATED CAPACITY:	1000 (1000 M3/DAY)
OPERATION:	MUNICIPAL
PLANT SUPERINTENDENT:	D. MOORE
MINISTRY REGION:	CENTRAL
DISTRICT OFFICER	D. HOGG

MUNICIPALITY SERVED	POPULATION
CITY OF TORONTO	615,000
CITY OF ETOBICOKE	298,490
CITY OF NORTH YORK	556,308
CITY OF SCARBOROUGH	461,957
CITY OF YORK	133,856
BOROUGH OF EAST YORK	97,679
REGION OF YORK (SOUTH)	170,000

iii) Distribution System - Site 1 - This house is approximately 2 kilometer from the plant. Water was sampled through copper plumbing from the basement laundry tap. Sampling was discontinued at this site in March.

iv) Distribution System - Site 2 - This house is approximately 10 kilometer from the plant. Water was sampled through copper plumbing from the basement tap.

Sample lines in the plant were flushed prior to sampling to ensure that the water obtained was indicative of its origin and not residual water standing in the sample line.

At the distribution system location two types of samples were obtained: a standing and a free flow. The standing sample consisted of water that had been in the household plumbing and service connection for a minimum of six hours. These samples are used to make an assessment of the amount by which levels of inorganic compounds and metals may be changed on standing, due to leaching from (or deposition on), the plumbing system. The only analyses carried out on these samples therefore, are General Chemistry and Metals. The free flow sample represented fresh water from the distribution main that had been flowing at the sample tap for five minutes before being sampled.

Attempts were made to capture the same block of water at each sampling point by taking the retention time into consideration. The retention time was calculated by dividing the volume of water between the two sampling points by the sample day flow. For example, if it was determined that the retention time within the plant was five hours then there would be a five hour interval between the raw and treated sampling. Similarly, if it was estimated that it took approximately one day for the water to travel from the plant to the distribution system site, this site would be sampled one day after the treated water from the plant.

Stringent DWSP sampling protocols were followed to ensure that all samples were taken in a uniform manner.

Sample day flow, treatment chemical dosages and Field Chemistry measurements such as Turbidity, Chlorine Residuals, pH and Temperature were recorded on the day of sampling and were entered onto the DWSP data base as submitted.

RESULTS

The R. C. Harris Water Treatment Plant was sampled for approximately 160 parameters on a monthly basis. One site from the distribution system was sampled in January, February, March, April, October, November and December, the second site was only sampled

in January and March.

The Specific Pesticides and Chlorophenols scans were sampled for in June and November and only in the raw and treated water. Polynuclear Aromatic Hydrocarbons and Phenolics are only analysed for in the raw and treated water at the plant. As a result of an unforeseen emergency the laboratory capacity was exceeded and analysis for volatiles could not be carried out when the samples were received. Since analysis for volatiles is no longer valid after four weeks of storage, volatile results for February are not available.

Table 3 contains information on the sample day retention time, flow rate and treatment chemicals used and their associated dosages.

Table 4 is a summary break-down of the number of water samples analysed for by parameter and by water type. The number of times that a positive or trace result was detected is also reported.

Positive denotes that the result is greater than the statistical limit of detection established by the Ministry of the Environment (MOE) laboratory staff and is quantifiable. Trace (<T) denotes that the level measured is greater than the lowest value detectable by the method but lies so close to the detection limit that it cannot be confidently quantified.

Table 5 presents the results for parameters detected on at least one occasion.

Table 6 lists all parameters analysed in the DWSP.

Associated guidelines and detection limits are also supplied on both tables. Parameters are listed alphabetically within each scan.

DISCUSSION

General

Water quality is judged by comparison with the Ontario Drinking Water Objectives (ODWOs) as defined in the 1984 publication (ISBN 0-7743-8985-0). The Province of Ontario has health related and aesthetic objectives for 49 parameters, which are currently under review. When an ODWO is not available guidelines/limits from other agenices are consulted. The Parameter Listing System (PALIS) recently published (ISBN 0-7729-4461-X) by the MOE catalogues and keeps current over 1750 guidelines for 650 parameters from agencies throughout the world.

Although some of the parameters measured on DWSP may be present in the raw and treated water as a result of pollution, many of the compounds detected are naturally occuring or are treatment by-

products.

Plant operational personnel address occurrences of taste and odour or biological water quality parameters. The DWSP does not assess these aspects of the water supply.

As stated under Results, traces do not indicate quantifiable values, as defined by established MOE Laboratory analytical reporting protocols. While they can be useful in trend analysis or confirmation of the presence of a specific contaminant that is repeatedly detected at these levels, the occasional finding of a trace level of a contaminant is not considered to be significant. **DISCUSSION OF GUIDELINES AND LIMITS THEREFORE, IS ONLY CONDUCTED ON POSITIVE RESULTS.**

Bacteriology

Positive results for the Bacteriology scan were present eleven times in the treated water, once in the distribution system Site 1 water and three times in the Site 2 water. In most cases the positive parameters were Standard Plate Count, Total Coliform and/or Total Coliform Background.

Coliforms, fecal coliforms and Escherichia coli were detected as the result of a positive presence/absence test for the Janaury treated water sample. The District Officer was notified. These

organisms were not detected in any other treated water sample.

Guidelines for bacteriological sampling and testing of a supply are developed to maintain a proper supervision of its bacteriological quality; the routine monitoring program usually requires the taking of multiple samples in a given system. Full interpretation of bacteriological quality cannot be made on the basis of single samples. Further, bacteriological limits were developed in acknowledgement that the presence of coliforms may be detected due to their non-uniform distribution throughout the distribution system and the fact that their enumeration is subject to considerable variation. For these reasons, the occasional finding of low numbers of coliform organisms is not unexpected. Routine bacteriological monitoring, as outlined in the ODWOs is carried out by the operating authority.

Inorganic and Physical Parameters

Laboratory and Field Chemistry

The results for Laboratory Chemistry and Field Chemistry scans were below applicable health related ODWOs.

The Langelier Index is used extensively in estimating the corrosion potential of water. An increasingly negative index indicates the increasing possibility of corrosion. It is considered sound engineering practice to maintain a slightly positive Langelier

Index. The Langelier Index for the R.C. Harris water is in the positive range with one exception in August.

Turbidity in water is caused by the presence of suspended matter such as clay, silt, colloidal particles, plankton and other microscopic organisms. The most important potential health effect of Turbidity is its interference with disinfection in the treatment plant and maintenance of a chlorine residual. The ODWO of 1 Formazin Turbidity Unit (FTU) is only applicable to treated water leaving the plant.

The aesthetic ODWO of 5 True Colour Units (TCU) was exceeded in five of the standing samples and seven of the free flow samples from Site 2. This site is situated on a dead end main which means that freshly treated water does not flow through this area as often as in a central main. This is also indicated by the high Turbidity values found in the free flow samples from this site. Colour in drinking water may be due to the presence of natural or synthetic organic substances as well as certain metallic ions and disturbed sediments.

The Total Ammonium levels are high in most treated water samples, not as a result of naturally occurring ammonia (eg. from sewage pollution) but from the anhydrous ammonia added in the treatment process. The ammonia is added at the post-chlorination stage to provide a long lasting combined chlorine (chloramine) residual in

the distribution system. Substantial free chlorine residuals were found in January, February, May and September; Table 3 data indicates that no ammonia anhydrous was added for January, May or September and minimal amounts were added in February. While the European Economic Community has an aesthetic guideline of .05 mg/L, the Maximum Admissable Concentration is .50 mg/L and is set as a result of the concern for potential sewage pollution and its detection.

The ODWO recommend a hardness level of between 80 and 100 mg/L as calcium carbonate for domestic waters, to provide an acceptable balance between corrosion and incrustation. Water supplies with a hardness greater than 200 mg/L are considered poor and would possess a tendency to form scale deposits and result in excessive soap consumption. Hardness levels for the R.C Harris water ranged from 130 mg/L to 143 mg/L as calcium carbonate.

It is desirable that the Temperature of drinking water be less than 15°C; the palatability of water is enhanced by its coolness. A temperature below 15°C will tend to reduce the growth of nuisance organisms and hence minimize associated taste, colour, odour and corrosion problems. The temperature of the delivered water may increase in the distribution system due to the warming effect of the soil in late summer and fall and/or as a result of higher temperatures in the source water. The desired ODWO was exceeded

once in the free flow distribution water at Site 2.

As part of the treatment process, hydrofluosilicic acid is added to the treated water (Table 3). Where fluoridation is practiced, the Fluoride concentration recommended in the ODWO is 1.2 mg/L, plus or minus 0.2 mg/L. Results indicate that this level was maintained.

Metals

The results reported for the Metals scan were below any applicable ODWOs.

Copper, Iron, Maganese and Zinc levels were lower in the treated water as compared to the raw water. This is the result of the treatment process. The addition of Alum as a coagulant to the raw water (Table 3) and the resulting coagulation/settling process has been shown to reduce the levels of most metals.

Elevated levels of Iron were present in all distribution system samples as compared to the treated water leaving the plant indicating that Iron was leached from the distribution system as the water travelled to each house. The aesthetic ODWO of 0.3 mg/L was exceeded on two occasions at distribution system Site 2. At levels higher than 0.3 mg/L, iron may impart a brownish colour to laundered goods and produce a bitter astringent taste in water and beverages.

Elevated levels of Copper, Lead, Nickel and Zinc were detected in the standing samples as compared to the free flow distribution samples thus, indicating that small quantities of these metals were leached from the household plumbing as the water stood overnight.

Higher levels of Iron and Manganese were detected in all samples from distribution system Site 2 as compared to all other treated water samples. This sample site is further from the water treatment plant then Site 1 and is situated on a dead end main. Water travels through more distribution system pipes prior to reaching Site 2 thus, having more potential to leach metals.

Although the Langelier Index indicates minimal potential for corrosion some metals will be leached in standing samples in most supplies.

At present, there is no evidence that Aluminum is physiologically harmful and no health limit for drinking water has been specified. The measure of residual Aluminum in the treated water is important to indicate the efficiency of the treatment process. The ODWO indicates that a useful guideline is to maintain a residual below 0.1 mg/L as Al in the water leaving the plant to avoid problems in the distribution system. Aluminum values exceeded the ODWO operational guideline on three occasions. The Municipality of Toronto Department of Works in conjunction with the Ministry of the

Environment is currently studying the issue of Aluminum in drinking water, with the intent of establishing comparable methods for the analysis of aluminum residuals and to optimize the amount of alum added in the treatment process.

Organic Parameters

Chloroaromatics

The results of the Chloroaromatics scan showed that no chloroaromatics were detected.

Chlorophenols

The results of the Chlorophenols scan showed that no Chlorophenols were detected.

Pesticides and PCB (Polychlorinated Biphenyl)

The results of the Pesticides and PCB scan showed that no PCBs were detected and that three pesticides were detected:

Alpha BHC

Lindane

Cyanazine (Bladex)

There are several isomers of BHC (Benzene Hexachloride); gamma BHC is the active ingredient of the pesticide Lindane, while alpha BHC is the predominant isomer found in surface waters from the Great

Lakes Basin.

Alpha BHC was detected at trace levels, in nine of the raw waters, eight of the treated waters, two of the distribution system Site 1 waters and five of the Site 2 waters.

Lindane was detected at trace levels, twice in the raw water, three times in the treated water and once in both distribution system site waters.

Cyanazine was detected once at a trace level in the distribution system Site 2 water.

Specific Pesticides

Results of the Specific Pesticides scan showed that no specific pesticides were detected.

Phenolics

The maximum desirable concentration of phenolic substances in drinking water is 2.0 ug/L. This limit has been set to prevent the occurrence of undesirable tastes and odours, particularly in chlorinated water. Phenolics were detected in the raw water at 1.2 ug/L in June and 1.4 ug/L in September and in the treated water at 1.6 ug/L in August, 1.4 ug/L in November and 1.0 ug/L in December. Phenolics were detected at trace levels, nine times in the raw water and eight times in the treated water. Phenolic compounds are

industrial processes.

Polynuclear Aromatic Hydrocarbons (PAHs)

The results of the PAH scan showed that no PAHs were detected.

Volatiles

Within the Volatiles scan six parameters, other than Trihalomethanes(THMs), were detected:

Benzene

Toluene

Ethylbenzene

Styrene

Methylene Chloride (Dichloromethane)

1,2-Dichlorobenzene

Benzene was detected at a trace level, once in the distribution system Site 2 water.

Toluene was detected at trace levels, once in the raw water, four times in the treated water and once at both distribution system sites. The detection of toluene at low, trace levels is a laboratory artifact derived from the analytical methodology. The purge-and-trap analytical technique depends on the purging of the volatile organics in the water sample with helium gas onto a Tenax trapping column. The volatile materials are subsequently thermally desorbed, separated and quantified. Tenax, a toluene-like polymeric

material, tends to decompose sporadically upon heating into toluene and other aromatic componenets (ethylbenzene and xylene) giving instrument blanks in the order of 0.05 ug/L.

The detected trace levels of Styrene are also considered to be laboratory artifacts due to the outgassing of monomeric styrene from the polystyrene shipping containers. The sporadic background levels from this source are in the order of 0.05 ug/L.

Ethylbenzene was detected at trace levels, four times in both the raw water and the treated water and twice in the distribution system Site 2 water.

These volatiles are typically found on an occasional basis at other water supplies included on the DWSP usually at trace levels.

Methylene chloride was detected at a trace level, twice in the treated water and twice in the distribution system Site 2 water.

1,2-Dichlorobenzene was detected at a trace level, once in the raw water.

THMs are acknowledged to be produced during the water treatment process and will always occur in chlorinated surface waters. THMs in drinking water are comprised of Chloroform, Chlorodibromomethane

and Dichlorobromomethane. Bromoform occurs occasionally. Results are reported for the individual compounds as well as for total THMs.

Chloroform, Chlorodibromomethane, Dichlorobromomethane and Total THMs were detected in all of the treated waters. Bromoform was detected at trace levels, in all but the December treated waters. All Total THM occurrences, ranging from 14.8 ug/L to 39.6 ug/L, were well below the ODWO of 350 ug/L. THMs were present at very low levels in the August raw water sample indicating the presence of small amounts of chlorine.

Raw and treated water quality from 1986, 1987 and 1988 has remained consistent.

CONCLUSIONS

The Metro Toronto (R.C. Harris) Water Treatment Plant for the sample year of 1988 produced good quality water at the plant as assessed by the results for parameters analysed in DWSP and this quality was maintained in the distribution system.

No health related guidelines, for organic or inorganic parameters, were exceeded during 1986, 1987 or 1988.

TABLE 3

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) SAMPLE DAY CONDITI 1988

	SAMPLE DAY CONDITIONS		TREATMENT CHEMICAL DOSAGES (MG/L)					
			COAGULATION	PRE-CHLORINATION	FLUORIDATION	POST-CHLORINATION	DECHLORINATION	CHLORAMINATION
DATE	RETENTION TIME(HRS)	FLOW (1000 M3)	ALUM LIQUID	CHLORINE	HYDROFLUOSILICIC ACID	CHLORINE	SULPHUR DIOXIDE	AMMONIUM ANHYDROUS
JAN 19	10.5	540.0	03.02	01.51	01.01	01.70	01.57	.
FEB 16	8.9	640.0	03.02	00.79	01.01	01.89	01.57	00.04
MAR 22	9.0	631.1	03.02	00.79	01.01	00.60	00.60	00.22
APR 19	10.4	550.0	03.02	00.79	01.01	02.02	02.02	00.17
MAY 17	12.1	468.0	03.02	00.79	01.26	02.65	01.57	.
JUN 20	7.1	799.7	03.02	00.79	01.14	01.89	01.26	00.17
JUL 18	10.1	564.0	03.02	01.01	01.01	01.70	01.26	00.22
AUG 15	7.5	755.4	03.02	01.01	01.07	01.57	01.20	00.16
SEP 19	8.2	691.4	03.02	01.01	01.26	00.51	00.15	.
OCT 18	10.5	539.7	03.02	01.01	01.07	01.70	01.26	00.16
NOV 22	9.3	610.0	03.02	01.01	01.07	01.51	00.79	00.13
DEC 13	9.3	609.0	03.02	01.01	01.01	01.39	00.69	00.18

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP)

SUMMARY TABLE OF RESULTS (1987)

SCAN	PARAMETER	RAW			TREATED			SITE 1			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
BACTERIOLOGICAL	AEROMONAS SP	.	.	.	1	0	0	.	.	.	.	.	.
	E. COLI P/A	.	.	.	1	1	0	.	.	.	.	.	.
	FECAL COLIFORM MF	12	5	0	.	.	.	.	.	.	.	.	.
	FECAL COLIFORM	.	.	.	1	1	0	.	.	.	.	.	.
	STANDRD PLATE CNT MF	8	8	0	12	6	0	2	1	0	7	2	0
	P/A BOTTLE	.	.	.	8	1	0	2	0	0	4	0	0
	STAPH AUREUS	.	.	.	1	0	0	.	.	.	.	.	.
	COLIFORM	.	.	.	1	1	0	.	.	.	.	.	.
	TOTAL COLIFORM MF	12	11	0	12	0	0	2	0	0	7	0	0
	T COLIFORM BCKGRD MF	12	12	0	12	1	0	2	0	0	7	1	0
*TOTAL SCAN BACTERIOLOGICAL		44	36	0	49	11	0	8	1	0	25	3	0
*TOTAL GROUP BACTERIOLOGICAL		44	36	0	49	11	0	8	1	0	25	3	0
CHEMISTRY (FLD)	FLD CHLORINE (COMB)	.	.	.	12	12	0	4	4	0	14	14	0
	FLD CHLORINE FREE	.	.	.	12	12	0	3	3	0	.	.	.
	FLD CHLORINE (TOTAL)	.	.	.	12	12	0	4	4	0	14	14	0
	FLD PH	12	12	0	12	12	0	4	4	0	14	14	0
	FLD TEMPERATURE	12	12	0	12	12	0	4	4	0	14	14	0
	FLD TURBIDITY	12	12	0	12	12	0	4	4	0	14	14	0
*TOTAL SCAN CHEMISTRY (FLD)		36	36	0	72	72	0	23	23	0	70	70	0
CHEMISTRY (LAB)	ALKALINITY	12	12	0	11	11	0	3	3	0	14	14	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP)

SUMMARY TABLE OF RESULTS (1987)

SCAN	PARAMETER	SITE RAW TOTAL	RAW POSITIVE	RAW TRACE	TREATED TOTAL	TREATED POSITIVE	TREATED TRACE	SITE 1 TOTAL	SITE 1 POSITIVE	SITE 1 TRACE	SITE 2 TOTAL	SITE 2 POSITIVE	SITE 2 TRACE
CHEMISTRY (LAB)	CALCIUM	12	12	0	12	12	0	3	3	0	14	14	0
	CYANIDE	12	0	0	12	0	0	2	0	0	7	0	0
	CHLORIDE	12	12	0	12	12	0	3	3	0	14	14	0
	COLOUR	12	0	12	12	0	12	3	0	3	14	13	0
	CONDUCTIVITY	12	12	0	12	12	0	3	3	0	14	14	0
	FLUORIDE	12	12	0	12	12	0	3	3	0	14	14	0
	HARDNESS	12	12	0	12	12	0	3	3	0	14	14	0
	IONCAL	12	6	0	12	6	0	5	0	0	14	6	0
	LANGELIERS INDEX	12	12	0	11	11	0	4	4	0	14	14	0
	MAGNESIUM	12	12	0	12	12	0	3	3	0	14	14	0
	SODIUM	12	12	0	12	12	0	3	3	0	14	14	0
	AMMONIUM TOTAL	12	10	2	12	11	1	3	3	0	14	3	11
	NITRITE	12	8	4	12	1	11	3	1	2	14	6	8
	TOTAL NITRATES	12	12	0	12	12	0	3	3	0	14	14	0
	NITROGEN TOT KJELD	12	12	0	12	12	0	3	3	0	14	14	0
	PH	12	12	0	12	12	0	3	3	0	14	14	0
	PHOSPHORUS FIL REACT	12	6	6	12	2	10	.	.	.	.	.	.
	PHOSPHORUS TOTAL	12	9	3	12	1	11	.	.	.	.	.	.
	SULPHATE	6	6	0	6	6	0	.	.	.	6	6	0
	TURBIDITY	12	12	0	12	9	3	3	3	0	14	13	1
*TOTAL SCAN CHEMISTRY (LAB)		246	201	27	244	178	48	56	44	5	251	215	20
METALS	SILVER	12	0	5	12	0	8	4	0	3	14	0	8

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP)

SUMMARY TABLE OF RESULTS (1987)

		SITE											
		RAW			TREATED			SITE 1			SITE 2		
SCAN	PARAMETER	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
METALS	ALUMINUM	12	12	0	12	12	0	4	4	0	14	14	0
	ARSENIC	12	6	6	12	5	7	4	0	4	14	1	13
	BARIUM	12	12	0	12	12	0	4	4	0	14	14	0
	BORON	12	12	0	12	12	0	4	4	0	14	14	0
	BERYLLIUM	12	0	8	12	0	8	4	0	4	14	0	10
	CADMIUM	12	0	2	12	0	4	4	0	4	14	2	8
	COBALT	12	0	12	12	0	12	4	0	4	14	0	14
	CHROMIUM	12	7	5	12	5	7	4	1	3	14	4	10
	COPPER	12	12	0	12	11	1	4	4	0	14	14	0
	IRON	12	1	9	12	0	3	4	4	0	14	14	0
	MERCURY	12	5	5	12	5	4	2	2	0	7	4	3
	MANGANESE	12	12	0	12	3	9	4	4	0	14	14	0
	MOLYBDENUM	12	12	0	12	12	0	4	4	0	14	14	0
	NICKEL	12	1	9	12	1	10	4	3	1	14	7	7
	LEAD	12	11	1	12	7	5	4	4	0	14	14	0
	ANTIMONY	12	11	1	12	12	0	4	4	0	14	12	2
	SELENIUM	12	0	6	12	0	9	4	0	4	14	0	14
	STRONTIUM	12	12	0	12	12	0	4	4	0	14	14	0
	TITANIUM	12	11	1	12	11	1	4	4	0	14	14	0
	THALLIUM	12	0	3	12	0	4	4	0	3	14	0	7
	URANIUM	12	12	0	12	12	0	4	4	0	14	14	0
	VANADIUM	12	0	12	12	1	11	4	0	4	14	0	14
	ZINC	12	12	0	12	11	1	4	4	0	14	14	0
*TOTAL SCAN METALS		288	161	85	288	144	104	94	58	34	329	198	110
*TOTAL GROUP INORGANIC & PHYSICAL		570	398	112	604	394	152	173	125	39	650	483	130

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP)

SUMMARY TABLE OF RESULTS (1987)

SCAN	PARAMETER	SITE RAW TOTAL	RAW POSITIVE	RAW TRACE	TREATED TOTAL	TREATED POSITIVE	TREATED TRACE	SITE 1 TOTAL	SITE 1 POSITIVE	SITE 1 TRACE	SITE 2 TOTAL	SITE 2 POSITIVE	SITE 2 TRACE
CHLOROAROMATICS	HEXACHLOROBUTADIENE	12	0	0	12	0	0	2	0	0	7	0	0
	123 TRICHLOROBENZENE	12	0	0	12	0	0	2	0	0	7	0	0
	1234 T-CHLOROBENZENE	12	0	0	12	0	0	2	0	0	7	0	0
	1235 T-CHLOROBENZENE	12	0	0	12	0	0	2	0	0	7	0	0
	124 TRICHLOROBENZENE	12	0	0	12	0	0	2	0	0	7	0	0
	1245 T-CHLOROBENZENE	12	0	0	12	0	0	2	0	0	7	0	0
	135 TRICHLOROBENZENE	12	0	0	12	0	0	2	0	0	7	0	0
	HCB	12	0	0	12	0	0	2	0	0	7	0	0
	HEXACHLOROETHANE	12	0	0	12	0	0	2	0	0	7	0	0
	OCTACHLOROSTYRENE	12	0	0	12	0	0	2	0	0	7	0	0
	PENTACHLOROBENZENE	12	0	0	12	0	0	2	0	0	7	0	0
	236 TRICHLOROTOLUENE	12	0	0	12	0	0	2	0	0	7	0	0
	245 TRICHLOROTOLUENE	12	0	0	12	0	0	2	0	0	7	0	0
	26A TRICHLOROTOLUENE	12	0	0	12	0	0	2	0	0	7	0	0
*TOTAL SCAN CHLOROAROMATICS		168	0	0	168	0	0	28	0	0	98	0	0
CHLOROPHENOLS	234 TRICHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
	2345 T-CHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
	2356 T-CHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
	245-TRICHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
	246-TRICHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
	PENTACHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
*TOTAL SCAN CHLOROPHENOLS		12	0	0	12	0	0	0	0	0	0	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP)

SUMMARY TABLE OF RESULTS (1987)

SCAN	PARAMETER	SITE RAW TOTAL	RAW POSITIVE	RAW TRACE	TREATED TOTAL	TREATED POSITIVE	TREATED TRACE	SITE 1 TOTAL	SITE 1 POSITIVE	SITE 1 TRACE	SITE 2 TOTAL	SITE 2 POSITIVE	SITE 2 TRACE
PAH	PHENANTHRENE	12	0	0	12	0	0	.	.	.	.	.	.
	ANTHRACENE	12	0	0	12	0	0	.	.	.	.	.	.
	FLUORANTHENE	12	0	0	12	0	0	.	.	.	.	.	.
	PYRENE	12	0	0	12	0	0	.	.	.	.	.	.
	BENZO(A)ANTHRACENE	12	0	0	12	0	0	.	.	.	.	.	.
	CHRYSENE	12	0	0	12	0	0	.	.	.	.	.	.
	DIMETH. BENZ(A)ANTHR	12	0	0	12	0	0	.	.	.	.	.	.
	BENZO(E) PYRENE	12	0	0	12	0	0	.	.	.	.	.	.
	BENZO(J) FLUORANTHEN	0	0	0	0	0	0	.	.	.	.	.	.
	BENZO(B) FLUORANTHEN	12	0	0	12	0	0	.	.	.	.	.	.
	PERYLENE	12	0	0	12	0	0	.	.	.	.	.	.
	BENZO(K) FLUORANTHEN	12	0	0	12	0	0	.	.	.	.	.	.
	BENZO(A) PYRENE	12	0	0	12	0	0	.	.	.	.	.	.
	BENZO(G,H,I) PERYLEN	12	0	0	12	0	0	.	.	.	.	.	.
	DIBENZO(A,H) ANTHRAC	12	0	0	12	0	0	.	.	.	.	.	.
	INDENO(1,2,3-C,D) PY	12	0	0	12	0	0	.	.	.	.	.	.
	BENZO(B) CHRYSENE	12	0	0	12	0	0	.	.	.	.	.	.
	ANTHANTHRENE	0	0	0	0	0	0	.	.	.	.	.	.
	CORONENE	12	0	0	12	0	0	.	.	.	.	.	.
*TOTAL SCAN PAH		204	0	0	204	0	0	0	0	0	0	0	0
PESTICIDES & PCB	ALDRIN	12	0	0	12	0	0	2	0	0	7	0	0
	ALPHA BHC	12	0	9	12	0	8	2	0	2	7	0	5

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP)

SUMMARY TABLE OF RESULTS (1987)

SCAN	PARAMETER	SITE RAW TOTAL	RAW POSITIVE	RAW TRACE	TREATED TOTAL	TREATED POSITIVE	TREATED TRACE	SITE 1 TOTAL	SITE 1 POSITIVE	SITE 1 TRACE	SITE 2 TOTAL	SITE 2 POSITIVE	SITE 2 TRACE
PESTICIDES & PCB	BETA BHC	12	0	0	12	0	0	2	0	0	7	0	0
	LINDANE	12	0	2	12	0	3	2	0	1	7	0	1
	ALPHA CHLORDANE	12	0	0	12	0	0	2	0	0	7	0	0
	GAMMA CHLORDANE	12	0	0	12	0	0	2	0	0	7	0	0
	DIELDRIN	12	0	0	12	0	0	2	0	0	7	0	0
	METHOXYCHLOR	12	0	0	12	0	0	2	0	0	7	0	0
	ENDOSULFAN I	12	0	0	12	0	0	2	0	0	7	0	0
	ENDOSULFAN II	12	0	0	12	0	0	2	0	0	7	0	0
	ENDRIN	12	0	0	12	0	0	2	0	0	7	0	0
	ENDOSULFAN SULPHATE	12	0	0	12	0	0	2	0	0	7	0	0
	HEPTACHLOR EPOXIDE	12	0	0	12	0	0	2	0	0	7	0	0
	HEPTACHLOR	12	0	0	12	0	0	2	0	0	7	0	0
	MIREX	12	0	0	12	0	0	2	0	0	7	0	0
	OXYCHLORDANE	12	0	0	12	0	0	2	0	0	7	0	0
	OPDDT	12	0	0	12	0	0	2	0	0	7	0	0
	PCB	12	0	0	12	0	0	2	0	0	7	0	0
	DDD	12	0	0	12	0	0	2	0	0	7	0	0
	PPDDE	12	0	0	12	0	0	2	0	0	7	0	0
	PPDDT	12	0	0	12	0	0	2	0	0	7	0	0
	AMETRINE	12	0	0	12	0	0	2	0	0	7	0	0
	ATRAZINE	12	0	0	12	0	0	2	0	0	7	0	0
	ATRATONE	12	0	0	12	0	0	2	0	0	7	0	0
	CYANAZINE	12	0	0	12	0	0	2	0	0	7	0	1
	DES ETHYL ATRAZINE	6	0	0	6	0	0	.	.	.	3	0	0
	DES ETHYL SIMAZINE	6	0	0	6	0	0	.	.	.	3	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP)

SUMMARY TABLE OF RESULTS (1987)

SCAN	PARAMETER	SITE RAW TOTAL	RAW POSITIVE	RAW TRACE	TREATED TOTAL	TREATED POSITIVE	TREATED TRACE	SITE 1 TOTAL	SITE 1 POSITIVE	SITE 1 TRACE	SITE 2 TOTAL	SITE 2 POSITIVE	SITE 2 TRACE
PESTICIDES & PCB	PROMETONE	12	0	0	12	0	0	2	0	0	7	0	0
	PROPAZINE	12	0	0	12	0	0	2	0	0	7	0	0
	PROMETRYNE	12	0	0	12	0	0	2	0	0	7	0	0
	METRIBUZIN	12	0	0	12	0	0	2	0	0	7	0	0
	SIMAZINE	12	0	0	12	0	0	2	0	0	7	0	0
	ALACHLOR	12	0	0	12	0	0	2	0	0	7	0	0
	METOLACHLOR	12	0	0	12	0	0	2	0	0	7	0	0
*TOTAL SCAN PESTICIDES & PCB		396	0	11	396	0	11	64	0	3	230	0	7
PHENOLICS	PHENOLICS	12	2	9	12	3	8	.	.	.	.	.	.
*TOTAL SCAN PHENOLICS		12	2	9	12	3	8	0	0	0	0	0	0
SPECIFIC PESTICIDES	TOXAPHENE	0	0	0	0	0	0	0	0	0	0	0	0
	2,4,5-T	2	0	0	2	0	0	.	.	.	.	.	.
	2,4-D	2	0	0	2	0	0	.	.	.	.	.	.
	24DCHLRPHENOXYBUTYRC	2	0	0	2	0	0	.	.	.	.	.	.
	2,4 D PROPIONIC ACID	2	0	0	2	0	0	.	.	.	.	.	.
	DICAMBA	2	0	0	2	0	0	.	.	.	.	.	.
	PICHLORAM	0	0	0	0	0	0	.	.	.	.	.	.
	SILVEX	2	0	0	2	0	0	.	.	.	.	.	.
	DIAZINON	2	0	0	2	0	0	.	.	.	.	.	.

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP)

SUMMARY TABLE OF RESULTS (1987)

SCAN	PARAMETER	SITE	RAW			TREATED			SITE 1			SITE 2		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
SPECIFIC PESTICIDES	DICHLOROVOS	2	0	0	2	0	0	.	.	.	.	.	.
	CHLORPYRIFOS	2	0	0	2	0	0	.	.	.	.	.	.
	ETHION	2	0	0	2	0	0	.	.	.	.	.	.
	AZINPHOS-METHYL	0	0	0	0	0	0	.	.	.	.	.	.
	MALATHION	2	0	0	2	0	0	.	.	.	.	.	.
	MEVINPHOS	2	0	0	2	0	0	.	.	.	.	.	.
	METHYL PARATHION	2	0	0	2	0	0	.	.	.	.	.	.
	METHYLTRITHION	2	0	0	2	0	0	.	.	.	.	.	.
	PARATHION	2	0	0	2	0	0	.	.	.	.	.	.
	PHORATE	2	0	0	2	0	0	.	.	.	.	.	.
	RELDAN	2	0	0	2	0	0	.	.	.	.	.	.
	RONNEL	2	0	0	2	0	0	.	.	.	.	.	.
	AMINOCARB	0	0	0	0	0	0	.	.	.	.	.	.
	BENOMYL	2	0	0	2	0	0	.	.	.	.	.	.
	BUX	2	0	0	2	0	0	.	.	.	.	.	.
	CARBOFURAN	2	0	0	2	0	0	.	.	.	.	.	.
	CICP	2	0	0	2	0	0	.	.	.	.	.	.
	DIALLATE	2	0	0	2	0	0	.	.	.	.	.	.
	EPTAM	2	0	0	2	0	0	.	.	.	.	.	.
	IPC	2	0	0	2	0	0	.	.	.	.	.	.
	PROPOXUR	2	0	0	2	0	0	.	.	.	.	.	.
	CARBARYL	2	0	0	2	0	0	.	.	.	.	.	.
	BUTYLATE	2	0	0	2	0	0	.	.	.	.	.	.
*TOTAL SCAN SPECIFIC PESTICIDES		56	0	0	56	0	0	0	0	0	0	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP)

SUMMARY TABLE OF RESULTS (1987)

SCAN	PARAMETER	SITE RAW TOTAL	RAW POSITIVE	RAW TRACE	TREATED TOTAL	TREATED POSITIVE	TREATED TRACE	SITE 1 TOTAL	SITE 1 POSITIVE	SITE 1 TRACE	SITE 2 TOTAL	SITE 2 POSITIVE	SITE 2 TRACE
VOLATILES	BENZENE	11	0	0	10	0	0	2	0	0	6	0	1
	TOLUENE	11	0	1	10	2	2	2	1	0	6	1	0
	ETHYLBENZENE	11	0	4	10	0	4	2	0	0	6	0	2
	P-XYLENE	11	0	0	10	0	0	2	0	0	6	0	0
	M-XYLENE	11	0	0	10	0	0	2	0	0	6	0	0
	O-XYLENE	11	0	0	10	0	0	2	0	0	6	0	0
	STYRENE	3	1	2	3	0	3	.	.	.	3	0	2
	1,1 DICHLOROETHYLENE	11	0	0	10	0	0	2	0	0	6	0	0
	METHYLENE CHLORIDE	11	0	0	10	1	1	2	0	0	6	1	1
	T1,2DICHLOROETHYLENE	11	0	0	10	0	0	2	0	0	6	0	0
	1,1 DICHLOROETHANE	11	0	0	10	0	0	2	0	0	6	0	0
	CHLOROFORM	11	0	4	10	10	0	2	2	0	6	5	0
	111, TRICHLOROETHANE	11	0	0	10	0	0	2	0	0	6	0	0
	1,2 DICHLOROETHANE	11	0	0	10	0	0	2	0	0	6	0	0
	CARBON TETRACHLORIDE	11	0	0	10	0	0	2	0	0	6	0	0
	1,2 DICHLOROPROPANE	11	0	0	10	0	0	2	0	0	6	0	0
	TRICHLOROETHYLENE	11	0	0	10	0	0	2	0	0	6	0	0
	DICHLOROBROMOMETHANE	11	0	3	10	10	0	2	2	0	6	5	0
	112 TRICHLOROETHANE	11	0	0	10	0	0	2	0	0	6	0	0
	CHLORODIBROMOMETHANE	11	0	1	10	10	0	2	2	0	6	5	0
	T-CHLOROETHYLENE	11	0	0	9	0	0	2	0	0	6	0	0
	BROMOFORM	11	0	0	10	0	10	2	0	2	6	0	5
	1122 T-CHLOROETHANE	11	0	0	10	0	0	2	0	0	6	0	0
	CHLOROBENZENE	11	0	0	10	0	0	2	0	0	6	0	0
	1,4 DICHLOROBENZENE	11	0	0	10	0	0	2	0	0	6	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP)

SUMMARY TABLE OF RESULTS (1987)

SCAN	PARAMETER	SITE RAW TOTAL	RAW POSITIVE	RAW TRACE	TREATED TOTAL	TREATED POSITIVE	TREATED TRACE	SITE 1 TOTAL	SITE 1 POSITIVE	SITE 1 TRACE	SITE 2 TOTAL	SITE 2 POSITIVE	SITE 2 TRACE
VOLATILES	1,3 DICHLOROBENZENE	11	0	0	10	0	0	2	0	0	6	0	0
	1,2 DICHLOROBENZENE	11	0	1	10	0	0	2	0	0	6	0	0
	TRIFLUOROCHLOROTOLUE	5	0	0	4	0	0	2	0	0	3	0	0
	ETHLYENE DIBROMIDE	11	0	0	10	0	0	2	0	0	6	0	0
	TOTL TRIHALOMETHANES	11	0	1	10	10	0	2	2	0	6	5	0
*TOTAL SCAN VOLATILES		316	1	17	286	43	20	58	9	2	174	22	11
*TOTAL GROUP ORGANIC		1164	3	37	1134	46	39	150	9	5	502	22	18
TOTAL		1778	437	149	1787	451	191	331	135	44	1177	508	148

KEY TO TABLE 5 and 6

A ONTARIO DRINKING WATER OBJECTIVES (ODWO)
1. Maximum Acceptable Concentration (MAC)
1+. MAC for Total Trihalomethanes
1*. MAC for Bacteriological Analyses
Poor water quality is indicated when :
- total coliform counts > 0 < 5
- P/A Bottle Test is present after 48 hours
- Aeromonas organisms are detected in more than 25% of samples in a single submission or in successive submissions from the same sampling site
- Pseudomonas Aeruginosa, Staphylococcus Aureus and members of the Fecal Streptococcus group should not be detected in any sample
- Standard Plate Count should not exceed 500 organisms per ml at 35 ^{0}C within 48 hours

2. Interim Maximum Acceptable Concentration (IMAC)
3. Maximum Desirable Concentration (MDC)
4. Aesthetic or Recommended Operational Guideline
- hardness levels between 80 and 100 mg/L as calcium carbonate are considered to provide an acceptable balance between corrosion and incrustation, water supplies with a hardness >200 mg/L are considered poor and those in excess of 500 mg/L are unacceptable.

B HEALTH & WELFARE CANADA (H&W)
1. Maximum Acceptable Concentration (MAC)
2. Proposed MAC
3. Interim MAC
4. Aesthetic Objective (AO) (for xylenes, the AO is a total)

C WORLD HEALTH ORGANIZATION (WHO)
1. Guideline Value (GV)
2. Tentative GV
3. Aesthetic GV

D US ENVIRONMENTAL PROTECTION AGENCY (EPA)
1. Maximum Contaminant Level (MCL)
2. Suggested No-Adverse Effect Level (SNAEL)
3. Lifetime Health Advisory
4. EPA Ambient Water Quality Criteria

F EUROPEAN ECONOMIC COMMUNITY (EEC)
1. Health Related Guideline Level
2. Aesthetic Guideline Level
3. Maximum Admissable Concentration (MADC)

G CALIFORNIA STATE DEPARTMENT OF HEALTH-GUIDELINE VALUE

H USSR MAXIMUM PERMISSIBLE CONCENTRATION

I NEW YORK STATE AMBIENT WATER GUIDELINE

N/A NONE AVAILABLE

INTERPRETATION OF DATA

The interpretation of analytical results that are obtained from measurements near the limit of detection of the measurement process is subject to greater uncertainty than those at higher concentrations. The principle areas of concern relate to whether the substance has actually been detected, whether it has been properly identified, and whether it is an artifact of the measurement process. In other words, false positives can be caused by the instrumentation or the test procedures used, when in fact these compounds are not present in the sample.

There are several methods to treat data from such measurements:
1. Exclude the low-level data because of this uncertainty factor. However, studies of long-term environmental trends and modelling may be adversely affected by exclusion of such data.
2. Qualify these data so the user is aware of the greater uncertainty associated with their use.

For the Drinking Water Surveillance Program, measurements near the limit of detection of the measurement process are reported qualified by the code "<T". Results quantified by "W" indicate a zero measurement. These results are reported for purposes of modelling and long-term trend analysis and no significance should be attributed to a single determination of a substance below "T" (a single determination may well be a false positive). Repeat analysis or additional data are needed before it can be stated with certainty that the substance in question was truly present. On the other hand, it is less likely that repeated detection of a substance at or near the limit of detection at a specific location is solely due to an artifact in the measurement system, and more likely represents a true positive. However the average of such data is still only an estimate of the amount of substance present subject to the possible biases of the method used.

LABORATORY RESULTS, REMARK DESCRIPTIONS

.	No Sample Taken
BDL	Below Minimum Measurable Amount
<T	Greater Than Detection Limit But Not Confident (SEE INTERPRETATION OF RESULTS ABOVE)
>	Results Are Greater Than The Upper Limit
<=>	Approximate Result
!AW	No Data: Analysis Withdrawn
!CR	No Data: Could Not Confirm By Reanalysis
!CS	No Data: Contamination Suspected
!IL	No Data: Sample Incorrectly Labelled
!IS	No Data: Insufficient Sample
!LA	No Data: Laboratory Accident

!LD	No Data: Test Queued After Sample Discarded
!NA	No Data: No Authorization To Perform Reanalysis
!NP	No Data: No Procedure
!NR	No Data: Sample Not Received
!OP	No Data: Obscured Plate
!QU	No Data: Quality Control Unacceptable
!PE	No Data: Procedural Error - Sample Discarded
!PH	No Data: Sample pH Outside Valid Range
!RE	No Data: Received Empty
!RO	No Data: See Attached Report (no numeric results)
!SM	No Data: Sample Missing
!SS	No Data: Send Separate Sample Properly Preserved
!UI	No Data: Indeterminant Interference
!TX	No Data: Time Expired
A3C	Approximate, Total Count Exceeded 300 Colonies
APL	Additional Peak, Large, Not Priority Pollutant
APS	Additional Peak, Less Than, Not Priority Pollutant
CIC	Possible Contamination, Improper Cap
CRO	Calculated Result Only
PPS	Test Performed On Preserved Sample
RMP	P and M-Xylene Not Separated
RRV	Rerun Verification
RVU	Reported Value Unusual
SPS	Several Peaks, Small, Not Priority Pollutant
UAL	Unreliable: Sample Age Exceeds Normal Limit
UCR	Unreliable: Could Not Confirm By Reanalysis
UCS	Unreliable: Contamination Suspected
UIN	Unreliable: Indeterminant Interference
XP	Positive After X Number of Hours
T# (T06)	Result Taken After # Hours

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
CHEMISTRY (FLD)						
FLD CHLORINE (COMB) (MG/L)			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.	.190	.100	.100	.180	.200
FEB	.	.200	.	.	.160	.190
MAR	.	.600	.	.100	.150	.180
APR	.	.540	.	.	.180	.190
MAY	.	.100	.	.	.	.
JUN	.	.740	.	.	.	.
JUL	.	.680	.	.	.	.
AUG	.	.600	.	.	.	.
SEP	.	.160	.	.	.	.
OCT	.	.650	.	.	.180	.190
NOV	.	.560	.	.	.180	.190
DEC	.	.630	.150	.	.150	.160
FLD CHLORINE FREE (MG/L)			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.	.430	.100	.200	.	.
FEB	.	.450	.	.	.	.
MAR	.	.100	.	.600	.	.
APR	.	.130	.	.	.	.
MAY	.	.750	.	.	.	.
JUN	.	.040	.	.	.	.
JUL	.	.060	.	.	.	.
AUG	.	.080	.	.	.	.
SEP	.	.560	.	.	.	.
OCT	.	.100	.	.	.	.
NOV	.	.120	.	.	.	.
DEC	.	.100	.	.	.	.
FLD CHLORINE (TOTAL) (MG/L)			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.	.620	.200	.300	.180	.200
FEB	.	.650	.	.	.160	.190
MAR	.	.700	.	.700	.150	.180
APR	.	.670	.	.	.180	.190
MAY	.	.850	.	.	.	.
JUN	.	.780	.	.	.	.
JUL	.	.740	.	.	.	.
AUG	.	.680	.	.	.	.
SEP	.	.720	.	.	.	.
OCT	.	.750	.	.	.180	.190
NOV	.	.680	.	.	.180	.190
DEC	.	.730	.150	.	.150	.160

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
FEB	.	0	.	.	.	0
MAR	.	0	.	0	.	0
APR	.	0	.	.	.	0
MAY	.	0	.	.	.	.
JUN	.	0	.	.	.	.
JUL	.	0	.	.	.	.
AUG	.	0	.	.	.	.
STAPH AUREUS (0=ABSENT)		DET'N LIMIT = N/A		GUIDELINE = 0 (A1)		
JAN	.	0	.	.	.	.
COLIFORM (0=ABSENT)		DET'N LIMIT = N/A		GUIDELINE = 0 (A1)		
JAN	.	1	.	.	.	.
TOTAL COLIFORM MF (CT/100ML)		DET'N LIMIT = 0		GUIDELINE = 5/100ML(A1)		
JAN	38	0	.	0	.	0
FEB	21	0	.	.	.	0
MAR	6	0	.	0	.	0
APR	2 A3C	0	.	.	.	0
MAY	BDL	0	.	.	.	.
JUN	2	0	.	.	.	.
JUL	10 A3C	0	.	.	.	.
AUG	74	0	.	.	.	.
SEP	155 A>	0 T48	.	.	.	.
OCT	44 A3C	0 T48	.	.	.	0 T24
NOV	166 A3C	0 T24	.	.	.	0 T06
DEC	28 T24	0 T24	.	.	.	0 T06
T COLIFORM BCKGRD MF (CT/100ML)		DET'N LIMIT = 0		GUIDELINE = N/A		
JAN	71	0	.	0	.	0
FEB	42	0	.	.	.	0
MAR	46	0	.	0	.	0
APR	48000	0	.	.	.	0
MAY	28	0	.	.	.	.
JUN	10	0	.	.	.	.
JUL	1200	0	.	.	.	.
AUG	102	0	.	.	.	.
SEP	2400 >	0 T48	.	.	.	.
OCT	4800 >	1 T48	.	.	.	0 T24
NOV	1120 A3C	0 T24	.	.	.	0 T06
DEC	104 T24	0 T24	.	.	.	1 T06

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
FLD PH (DIMENSIONLESS)			DET'N LIMIT = N/A		GUIDELINE = 6.5-8.5(A4)	
JAN	8.140	7.310	7.580	7.430	7.350	7.360
FEB	8.180	7.360	"	"	7.460	7.480
MAR	8.200	7.410	"	7.600	7.500	7.490
APR	8.210	7.450	"	"	7.470	7.450
MAY	8.330	7.210	"	"	"	"
JUN	8.170	7.560	"	"	"	"
JUL	8.330	7.450	"	"	"	"
AUG	8.010	7.630	"	"	"	"
SEP	8.170	7.580	"	"	"	"
OCT	7.900	7.400	"	"	7.610	7.500
NOV	8.170	7.580	"	"	7.490	7.430
DEC	8.180	7.620	7.580	"	7.580	7.510
FLD TEMPERATURE (DEG.C)			DET'N LIMIT = N/A		GUIDELINE = 15 (A1)	
JAN	3.500	3.500	12.500	5.500	19.000	7.000
FEB	3.000	3.000	"	"	18.500	5.000
MAR	2.500	2.700	"	3.500	19.000	5.000
APR	3.500	3.700	"	"	19.500	9.000
MAY	6.800	8.000	"	"	"	"
JUN	9.500	8.500	"	"	"	"
JUL	9.200	9.700	"	"	"	"
AUG	10.100	10.500	"	"	"	"
SEP	10.200	11.000	"	"	"	"
OCT	6.500	6.900	"	"	21.500	17.000
NOV	5.200	5.900	"	"	20.000	13.500
DEC	4.100	4.500	20.500	"	20.500	10.500
FLD TURBIDITY (FTU)			DET'N LIMIT = N/A		GUIDELINE = 1.0 (A1)	
JAN	.950	.140	.230	.280	1.400	1.600
FEB	.450	.100	"	"	1.600	1.600
MAR	.810	.090	"	.210	1.300	1.700
APR	.830	.210	"	"	1.000	1.500
MAY	.950	.150	"	"	"	"
JUN	.600	.100	"	"	"	"
JUL	.560	.250	"	"	"	"
AUG	.850	.140	"	"	"	"
SEP	.620	.100	"	"	"	"
OCT	.530	.130	"	"	1.600	2.200
NOV	1.200	.100	"	"	1.200	1.300
DEC	.500	.100	.890	"	.890	1.200

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
CHEMISTRY (LAB)						
ALKALINITY (MG/L)			DET'N LIMIT = .200		GUIDELINE = 30-500 (A4)	
JAN	98.300	87.300	90.800	87.800	90.700	89.400
FEB	98.300	88.400	.	.	92.800	88.900
MAR	100.200	95.400	IRE	95.600	94.200	92.100
APR	101.900	ICR	.	.	90.900	93.000
MAY	99.700	87.300	.	.	.	.
JUN	102.800	92.200	.	.	.	.
JUL	102.100	92.600	.	.	.	.
AUG	100.800	92.400	.	.	.	.
SEP	102.000	95.600	.	.	.	.
OCT	102.800	93.900	.	.	97.000	96.000
NOV	102.300	93.800	.	.	94.100	94.500
DEC	102.400	94.500	.	.	96.800	94.600
CALCIUM (MG/L)			DET'N LIMIT = .100		GUIDELINE = 100 (F2)	
JAN	41.400	41.200	42.600	41.600	41.000	41.200
FEB	39.400	39.600	.	.	40.600	40.600
MAR	39.800	39.000	.	39.600	40.800	38.800
APR	40.200	40.200	.	.	40.200	40.200
MAY	40.000	40.400	.	.	.	.
JUN	40.400	40.400	.	.	.	.
JUL	41.800	42.000	.	.	.	.
AUG	40.800	41.800	.	.	.	.
SEP	40.800	40.400	.	.	.	.
OCT	39.800	39.000	.	.	39.400	39.800
NOV	42.800	42.800	.	.	43.200	41.600
DEC	41.600	41.800	.	.	43.000	41.600
CHLORIDE (MG/L)			DET'N LIMIT = .200		GUIDELINE = 250 (A3)	
JAN	23.400	26.600	27.100	26.900	26.600	26.400
FEB	23.000	25.700	.	.	27.200	26.300
MAR	23.100	25.700	IRE	25.400	27.300	26.300
APR	22.300	25.900	.	.	26.800	25.200
MAY	24.200	27.000	.	.	.	.
JUN	23.200	25.700	.	.	.	.
JUL	23.200	25.800	.	.	.	.
AUG	21.500	24.100	.	.	.	.
SEP	23.200	24.600	.	.	.	.
OCT	23.400	25.100	.	.	24.000	23.700
NOV	23.900	26.100	.	.	25.100	25.000
DEC	24.400	25.300	.	.	27.500	27.700

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
COLOUR (TCU)			DET'N LIMIT = .5		GUIDELINE = 5.0 (A3)	
JAN	1.500 <T	.500 <T	2.000 <T	1.500 <T	6.000	9.000
FEB	1.500 <T	.500 <T	.	.	6.000	7.500
MAR	1.500 <T	.500 <T	.	1.500 <T	5.500	8.000
APR	2.000 <T	.500 <T	.	.	BDL	7.500
MAY	1.500 <T	.500 <T	.	.	.	.
JUN	2.000 <T	1.000 <T	.	.	.	.
JUL	2.000 <T	.500 <T	.	.	.	.
AUG	1.500 <T	.500 <T	.	.	.	.
SEP	1.500 <T	.500 <T	.	.	.	.
OCT	2.000 <T	1.000 <T	.	.	6.000	8.000
NOV	2.000 <T	.500 <T	.	.	6.000	6.500
DEC	1.500 <T	.500 <T	.	.	4.000	6.000
CONDUCTIVITY (UMHO/CM)			DET'N LIMIT = 1		GUIDELINE = 400 (F2)	
JAN	329	332	341	335	338	338
FEB	325	330	.	.	345	334
MAR	323	329	IRE	333	334	329
APR	328	336	.	.	344	338
MAY	334	339	.	.	.	.
JUN	333	335	.	.	.	.
JUL	328	334	.	.	.	.
AUG	325	331	.	.	.	.
SEP	328	331	.	.	.	.
OCT	330	333	.	.	332	329
NOV	334	339	.	.	335	334
DEC	327	331	.	.	340	336
FLUORIDE (MG/L)			DET'N LIMIT = .01		GUIDELINE = 2.400 (A1)	
JAN	.100	1.100	1.080	1.080	1.140	1.060
FEB	.140	1.160	.	.	1.140	1.100
MAR	.140	1.110	.	1.210	1.200	1.140
APR	.140	1.100	.	.	1.220	1.150
MAY	.130	1.370	.	.	.	.
JUN	.120	1.210	.	.	.	.
JUL	.130	1.320	.	.	.	.
AUG	.140	1.300	.	.	.	.
SEP	.120	1.210	.	.	.	.
OCT	.120	1.180	.	.	1.240	1.260
NOV	.140	1.280	.	.	1.240	1.220
DEC	.140	1.040	.	.	1.100	1.060
HARDNESS (MG/L)			DET'N LIMIT = .500		GUIDELINE = 80-100 (A4)	

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
JAN	139.000	138.000	141.000	139.000	136.000	138.000
FEB	132.000	133.000	.	.	135.000	136.000
MAR	134.000	133.000	.	134.000	136.000	131.000
APR	135.000	134.000	.	.	135.000	135.000
MAY	133.000	134.000	.	.	.	.
JUN	134.000	134.000	.	.	.	.
JUL	139.000	140.000	.	.	.	.
AUG	137.000	139.000	.	.	.	.
SEP	138.000	136.000	.	.	.	.
OCT	133.000	130.000	.	.	132.000	133.000
NOV	143.000	143.000	.	.	143.000	139.000
DEC	140.000	141.000	.	.	143.000	137.000
IONCAL (DMSNLESS)			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF
FEB	.000 NAF	.000 NAF	.	.	.000 NAF	.000 NAF
MAR	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF	.000 NAF
APR	.000 NAF	.000 NAF	.	.	.000 NAF	.000 NAF
MAY	.000 NAF	.000 NAF	.	.	.	.
JUN	.000 NAF	.000 NAF	.	.	.	.
JUL	.650	1.977	.	.	.	.
AUG	1.143	3.672	.	.	.	.
SEP	.929	.398	.	.	.	.
OCT	4.690	4.303	.	.	3.928	2.166
NOV	2.519	4.162	.	.	5.350	2.674
DEC	2.575	.544	.000 NAF	.	.072	2.520
LANGELIERS INDEX (DMSNLESS)			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.405 NAF	.221 NAF	.272 NAF	.128 NAF	.155 NAF	.201 NAF
FEB	.294 NAF	.020 NAF	.	.	.060 NAF	.023 NAF
MAR	.457 NAF	.276 NAF	.	.304 NAF	.270 NAF	.179 NAF
APR	.538 NAF	.655 NAF	.	.	.347 NAF	.378 NAF
MAY	.346 NAF	.112 NAF	.	.	.	.
JUN	.564 NAF	.406 NAF	.	.	.	.
JUL	.476	.155	.	.	.	.
AUG	.190	-.137	.	.	.	.
SEP	.405	.142	.	.	.	.
OCT	.418	.279	.	.	.348	.408
NOV	.397	.089	.	.	.154	.210
DEC	.445	.282	.354 NAF	.	.354	.390
MAGNESIUM (MG/L)			DET'N LIMIT = .050		GUIDELINE = 30 (F2)	
JAN	8.600	8.500	8.600	8.400	8.200	8.400

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE						
	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
FEB	8.100	8.300	.	.	8.200	8.300
MAR	8.400	8.500	.	8.500	8.400	8.300
APR	8.400	8.300	.	.	8.400	8.400
MAY	8.100	8.000	.	.	.	.
JUN	8.100	8.100	.	.	.	.
JUL	8.300	8.400	.	.	.	.
AUG	8.500	8.500	.	.	.	.
SEP	8.700	8.500	.	.	.	.
OCT	8.200	8.000	.	.	8.200	8.200
NOV	8.600	8.700	.	.	8.600	8.600
DEC	8.700	8.800	.	.	8.800	9.000
SODIUM (MG/L)			DET'N LIMIT = .200		GUIDELINE = 200 (C3)	
JAN	12.400	12.400	12.800	12.600	12.800	12.600
FEB	12.200	12.000	.	.	14.000	12.800
MAR	12.400	12.200	.	13.200	12.600	12.200
APR	12.800	12.400	.	.	12.800	12.800
MAY	12.600	12.600	.	.	.	.
JUN	11.800	11.600	.	.	.	.
JUL	11.400	11.800	.	.	.	.
AUG	11.600	11.800	.	.	.	.
SEP	11.800	12.400	.	.	.	.
OCT	12.400	12.400	.	.	12.000	12.000
NOV	12.800	12.600	.	.	12.400	12.400
DEC	11.800	12.200	.	.	13.000	12.000
AMMONIUM TOTAL (MG/L)			DET'N LIMIT = 0.002		GUIDELINE = .05 (F2)	
JAN	.008 <T	.016	.014	.010	.004 <T	.006 <T
FEB	.004 <T	.006 <T	.	.	.002 <T	.004 <T
MAR	.012	.162	.	.144	.004 <T	.032
APR	.030	.146	.	.	.006 <T	.018
MAY	.052	.012	.	.	.	.
JUN	.010	.122	.	.	.	.
JUL	.030	.138	.	.	.	.
AUG	.014	.116	.	.	.	.
SEP	.026	.014	.	.	.	.
OCT	.090	.122	.	.	.002 <T	.004 <T
NOV	.022	.114	.	.	.006 <T	.008 <T
DEC	.010	.126	.	.	.010	.008 <T
NITRITE (MG/L)			DET'N LIMIT = 0.001		GUIDELINE = 1.000 (A1)	
JAN	.001 <T	.001 <T	.002 <T	.002 <T	.001 <T	.002 <T

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE			SITE 1		SITE 2	
TYPE	RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
FEB	.002 <T	.001 <T	.	.	.001 <T	.002 <T
MAR	.006	.007	.	.012	.002 <T	.014
APR	.007	.002 <T	.	.	.002 <T	.024
MAY	.016	.003 <T	.	.	.	.
JUN	.004 <T	.001 <T	.	.	.	.
JUL	.005	.001 <T	.	.	.	.
AUG	.004 <T	.001 <T	.	.	.	.
SEP	.005	.002 <T	.	.	.	.
OCT	.008	.002 <T	.	.	.004 <T	.005
NOV	.007	.004 <T	.	.	.006	.006
DEC	.005	.004 <T	.	.	.005	.004 <T
TOTAL NITRATES (MG/L)			DET'N LIMIT = .020		GUIDELINE = 10.000 (A1)	
JAN	.385	.385	.400	.395	.410	.380
FEB	.385	.380	.	.	.435	.405
MAR	.395	.410	.	.415	.530	.450
APR	.375	.380	.	.	.510	.450
MAY	.350	.370	.	.	.	.
JUN	.365	.360	.	.	.	.
JUL	.295	.300	.	.	.	.
AUG	.345	.340	.	.	.	.
SEP	.310	.300	.	.	.	.
OCT	.375	.360	.	.	.465	.455
NOV	.415	.430	.	.	.545	.545
DEC	.420	.430	.	.	.490	.440
NITROGEN TOT KJELD (MG/L)			DET'N LIMIT = .020		GUIDELINE = N/A	
JAN	.160	.150	.180	.140	.170	.140
FEB	.190	.180	.	.	.200	.160
MAR	.180	.330	.	.300	.330	.180
APR	.220	.330	.	.	.250	.190
MAY	.240	.170	.	.	.	.
JUN	.220	.270	.	.	.	.
JUL	.290	.280	.	.	.	.
AUG	.210	.300	.	.	.	.
SEP	.280	.190	.	.	.	.
OCT	.250	.240	.	.	.160	.140
NOV	.300	.270	.	.	.170	.160
DEC	.210	.270	.	.	.180	.170
PH (DIMENSNLESS)			DET'N LIMIT = N/A		GUIDELINE = 6.5-8.5(A4)	
JAN	8.240	8.110	8.130	8.010	8.030	8.080

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

SITE TYPE	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
FEB	8.150	7.920	.	.	7.930	7.910
MAR	8.300	8.150	IRE	8.170	8.130	8.070
APR	8.370	8.320	.	.	8.230	8.250
MAY	8.190	8.010	.	.	.	.
JUN	8.390	8.280	.	.	.	.
JUL	8.290	8.010	.	.	.	.
AUG	8.020	7.720	.	.	.	.
SEP	8.230	8.000	.	.	.	.
OCT	8.250	8.160	.	.	8.210	8.270
NOV	8.200	7.930	.	.	7.990	8.060
DEC	8.260	8.130	.	.	8.180	8.240
PHOSPHORUS FIL REACT (MG/L)		DET'N LIMIT = .0005		GUIDELINE = N/A		
JAN	.004	.002 <T	.	.	.	.
FEB	.004	.001 <T	.	.	.	.
MAR	.003	.002	.	.	.	.
APR	.004	.001 <T	.	.	.	.
MAY	.003	.001 <T	.	.	.	.
JUN	.001 <T	.001 <T	.	.	.	.
JUL	.000 <T	.002 <T	.	.	.	.
AUG	.000 <T	.001 <T	.	.	.	.
SEP	.002 <T	.001 <T	.	.	.	.
OCT	.000 <T	.000 <T	.	.	.	.
NOV	.003	.003	.	.	.	.
DEC	.001 <T	.001 <T	.	.	.	.
PHOSPHORUS TOTAL (MG/L)		DET'N LIMIT = .002		GUIDELINE = .40 (F2)		
JAN	.009 <T	.003 <T	.	.	.	.
FEB	.011	.005 <T	.	.	.	.
MAR	.010	.004 <T	.	.	.	.
APR	.014	.002 <T	.	.	.	.
MAY	.014	.004 <T	.	.	.	.
JUN	.010	.003 <T	.	.	.	.
JUL	.016	.006 <T	.	.	.	.
AUG	.002	.002	.	.	.	.
SEP	.011	.007 <T	.	.	.	.
OCT	.007 <T	.004 <T	.	.	.	.
NOV	.016	.004 <T	.	.	.	.
DEC	.007 <T	.002 <T	.	.	.	.
SULPHATE (MG/L)		DET'N LIMIT = .200		GUIDELINE = 500. (A3)		
JUL	27.400	31.000	.	.	.	.

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

SITE	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
			SITE 1		SITE 2	
TYPE	RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
AUG	26.800	30.680	.	.	.	.
SEP	27.900	29.600	.	.	.	.
OCT	29.500	32.500	.	.	30.600	30.300
NOV	27.310	30.240	.	.	28.920	28.980
DEC	30.000	33.500	.	.	33.000	34.500
TURBIDITY (FTU)		DET'N LIMIT = .02			GUIDELINE = 1.00 (A1)	
JAN	.760	.050 <T	.250	.200	1.210	1.250
FEB	.500	.070 <T	.	.	1.700	1.300
MAR	.790	.100	.	.070	.380	1.060
APR	2.100	.100	.	.	.900 <T	1.000
MAY	1.440	.140	.	.	.	.
JUN	1.060	.080 <T	.	.	.	.
JUL	.960	.830	.	.	.	.
AUG	.790	.140	.	.	.	.
SEP	1.910	.560	.	.	.	.
OCT	1.110	.450	.	.	.980	2.300
NOV	1.820	.240	.	.	.920	.880
DEC	1.130	.280	.	.	.920	.950

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
METALS						
SILVER (UG/L)			DET'N LIMIT = .020		GUIDELINE = 50. (A1)	
JAN	.060 <T	.040 <T	.200 <T	.020 <T	.050 <T	BDL
FEB	.040 <T	.080 <T	.	.	.080 <T	.030 <T
MAR	.020 <T	.020 <T	.	BDL	.030 <T	BDL
APR	BDL	.030 <T	.	.	.070 <T	BDL
MAY	BDL	BDL	.	.	.	.
JUN	.050 <T	.040 <T	.	.	.	.
JUL	.060 <T	.030 <T	.	.	.	.
AUG	BDL	BDL	.	.	.	.
SEP	BDL	BDL	.	.	.	.
OCT	BDL	BDL	.	.	BDL	BDL
NOV	BDL	.190 <T	.	.	.070 <T	BDL
DEC	BDL	.070 <T	.	.	.050 <T	.030 <T
ALUMINUM (UG/L)			DET'N LIMIT = .050		GUIDELINE = 100.(A4)	
JAN	21.000	55.000	37.000	56.000	36.000	33.000
FEB	11.000	67.000	.	.	41.000	33.000
MAR	17.000	69.000	.	54.000	40.000	38.000
APR	12.000	81.000	.	.	56.000	67.000
MAY	8.500	110.000	.	.	.	.
JUN	14.000	91.000	.	.	.	.
JUL	5.300	190.000	.	.	.	.
AUG	3.900	74.000	.	.	.	.
SEP	7.000	120.000	.	.	.	.
OCT	14.000	68.000	.	.	51.000	47.000
NOV	36.000	88.000	.	.	50.000	48.000
DEC	7.900	73.000	.	.	46.000	45.000
ARSENIC (UG/L)			DET'N LIMIT = 0.050		GUIDELINE = 50.0 (A1)	
JAN	1.000	.970 <T	.880 <T	.990 <T	.770 <T	.860 <T
FEB	.800 <T	1.000	.	.	.950 <T	.620 <T
MAR	.540 <T	.620 <T	.	.630 <T	.440 <T	.370 <T
APR	1.100	.930 <T	.	.	.990 <T	.840 <T
MAY	1.200	1.200	.	.	.	.
JUN	.930 <T	.720 <T	.	.	.	.
JUL	.770 <T	1.000 <T	.	.	.	.
AUG	1.100	1.200	.	.	.	.
SEP	1.600	1.400	.	.	.	.
OCT	1.300	1.400	.	.	1.100	1.000 <T
NOV	.940 <T	1.000 <T	.	.	.690 <T	.920 <T
DEC	.870 <T	.800 <T	.	.	.890 <T	.630 <T
BARIUM (UG/L)			DET'N LIMIT = 0.020		GUIDELINE = 1000. (A1)	

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

SITE TYPE	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
JAN	21.000	20.000	23.000	20.000	25.000	19.000
FEB	22.000	22.000	.	.	25.000	21.000
MAR	21.000	22.000	.	21.000	27.000	20.000
APR	22.000	22.000	.	.	25.000	21.000
MAY	23.000	22.000	.	.	.	.
JUN	26.000	25.000	.	.	.	.
JUL	23.000	22.000	.	.	.	.
AUG	23.000	22.000	.	.	.	.
SEP	23.000	23.000	.	.	.	.
OCT	24.000	22.000	.	.	23.000	22.000
NOV	24.000	23.000	.	.	22.000	23.000
DEC	22.000	24.000	.	.	28.000	24.000
BORON (UG/L)			DET'N LIMIT = 0.200		GUIDELINE = 5000. (A1)	
JAN	24.000	24.000	25.000	24.000	28.000	24.000
FEB	26.000	24.000	.	.	30.000	24.000
MAR	25.000	24.000	.	25.000	47.000	24.000
APR	39.000	23.000	.	.	37.000	24.000
MAY	34.000	28.000	.	.	.	.
JUN	30.000	29.000	.	.	.	.
JUL	28.000	26.000	.	.	.	.
AUG	45.000	44.000	.	.	.	.
SEP	67.000	38.000	.	.	.	.
OCT	38.000	37.000	.	.	32.000	38.000
NOV	36.000	32.000	.	.	27.000	68.000
DEC	52.000	30.000	.	.	64.000	28.000
BERYLLIUM (UG/L)			DET'N LIMIT = 0.010		GUIDELINE = .20 (H)	
JAN	.010 <T	.020 <T	.010 <T	.010 <T	.010 <T	.010 <T
FEB	BDL	.040 <T	.	.	.030 <T	.040 <T
MAR	.030 <T	.020 <T	.	.020 <T	.010 <T	.010 <T
APR	.020 <T	.020 <T	.	.	BDL	.020 <T
MAY	.050 <T	.030 <T	.	.	.	.
JUN	BDL	BDL	.	.	.	.
JUL	BDL	BDL	.	.	.	.
AUG	.030 <T	BDL	.	.	.	.
SEP	.110 <T	.030 <T	.	.	.	.
OCT	BDL	.030 <T	.	.	BDL	BDL
NOV	.070 <T	BDL	.	.	.030 <T	.080 <T
DEC	.160 <T	.060 <T	.	.	.090 <T	BDL
CADMIUM (UG/L)			DET'N LIMIT = 0.050		GUIDELINE = 5.000 (A1)	
JAN	.090 <T	.070 <T	.300 <T	.120 <T	.460 <T	.080 <T

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

SITE	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
			SITE 1		SITE 2	
TYPE	RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
FEB	.100 <T	.080 <T	.	.	.680	.070 <T
MAR	BDL	BDL	.	.050 <T	.370 <T	BDL
APR	BDL	BDL	.	.	.530	BDL
MAY	BDL	BDL	.	.	.	.
JUN	BDL	.070 <T	.	.	.	.
JUL	BDL	BDL	.	.	.	.
AUG	BDL	BDL	.	.	.	.
SEP	BDL	BDL	.	.	.	.
OCT	BDL	.060 <T	.	.	.390 <T	BDL
NOV	BDL	BDL	.	.	.090 <T	BDL
DEC	BDL	BDL	.	.	.360 <T	.070 <T
COBALT (UG/L)			DET'N LIMIT = 0.020		GUIDELINE = 1000 (H)	
JAN	.310 <T	.320 <T	.330 <T	.330 <T	.370 <T	.320 <T
FEB	.050 <T	.030 <T	.	.	.060 <T	.060 <T
MAR	.140 <T	.110 <T	.	.080 <T	.120 <T	.160 <T
APR	.060 <T	.070 <T	.	.	.140 <T	.080 <T
MAY	.090 <T	.030 <T	.	.	.	.
JUN	.050 <T	.060 <T	.	.	.	.
JUL	.160 <T	.170 <T	.	.	.	.
AUG	.070 <T	.070 <T	.	.	.	.
SEP	.230 <T	.130 <T	.	.	.	.
OCT	.160 <T	.170 <T	.	.	.160 <T	.200 <T
NOV	.130 <T	.050 <T	.	.	.120 <T	.140 <T
DEC	.120 <T	.110 <T	.	.	.130 <T	.100 <T
CHROMIUM (UG/L)			DET'N LIMIT = 0.100		GUIDELINE = 50. (A1)	
JAN	.510 <T	.460 <T	.470 <T	.480 <T	.960 <T	.260 <T
FEB	.600 <T	.470 <T	.	.	.360 <T	.320 <T
MAR	.660 <T	.510 <T	.	.460 <T	.380 <T	.320 <T
APR	5.000	.700 <T	.	.	.410 <T	.340 <T
MAY	3.400	1.800	.	.	.	.
JUN	1.000 <T	.940 <T	.	.	.	.
JUL	.390 <T	.440 <T	.	.	.	.
AUG	3.600	3.700	.	.	.	.
SEP	4.500	1.800	.	.	.	.
OCT	6.000	6.700	.	.	3.500	6.000
NOV	1.900	1.200	.	.	.580 <T	6.400
DEC	3.200	.590 <T	.	.	3.900	.320 <T
COPPER (UG/L)			DET'N LIMIT = .100		GUIDELINE = 1000 (A3)	
JAN	27.000	1.100	20.000	3.100	120.000	11.000
FEB	43.000	1.300	.	.	130.000	12.000

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

SITE	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
			SITE 1		SITE 2	
TYPE	RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
MAR	25.000	1.700	.	2.800	130.000	12.000
APR	23.000	1.300	.	.	140.000	14.000
MAY	22.000	3.500	.	.	.	.
JUN	24.000	3.000	.	.	.	.
JUL	20.000	1.000 <T	.	.	.	.
AUG	30.000	1.400	.	.	.	.
SEP	73.000	3.200	.	.	.	.
OCT	42.000	2.500	.	.	97.000	15.000
NOV	30.000	2.200	.	.	41.000	15.000
DEC	32.000	1.800	.	.	99.000	16.000
IRON (UG/L)		DET'N LIMIT = 4.000		GUIDELINE = 300. (A3)		
JAN	28.000 <T	BDL	46.000	53.000	270.000	330.000
FEB	21.000 <T	BDL	.	.	290.000	300.000
MAR	27.000 <T	BDL	.	47.000	240.000	280.000
APR	20.000 <T	6.100 <T	.	.	250.000	320.000
MAY	17.000 <T	6.900 <T	.	.	.	.
JUN	19.000 <T	5.500 <T	.	.	.	.
JUL	8.400 <T	BDL	.	.	.	.
AUG	BDL	BDL	.	.	.	.
SEP	15.000 <T	BDL	.	.	.	.
OCT	19.000 <T	BDL	.	.	270.000	300.000
NOV	55.000	BDL	.	.	250.000	260.000
DEC	BDL	BDL	.	.	200.000	240.000
MERCURY (UG/L)		DET'N LIMIT = 0.010		GUIDELINE = 1.000 (A1)		
JAN	.020	.050	.	.030	.	.030
FEB	.020	.040	.	.	.	.010
MAR	.050	.050	.	.070	.	.050
APR	.080	.070	.	.	.	.060
MAY	.080	.100	.	.	.	.
JUN	BDL	BDL	.	.	.	.
JUL	.020 <T	BDL	.	.	.	.
AUG	BDL	BDL	.	.	.	.
SEP	.020 <T	.020 <T	.	.	.	.
OCT	.030 <T	.040 <T	.	.	.	.020 <T
NOV	.040 <T	.040 <T	.	.	.	.030 <T
DEC	.040 <T	.040 <T	.	.	.	.030 <T
MANGANESE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 50.0 (A3)		
JAN	2.500	.310 <T	1.800	1.000	15.000	20.000
FEB	1.500	.360 <T	.	.	15.000	22.000
MAR	2.000	.440 <T	.	1.300	13.000	18.000

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
APR	2.200	.460 <T	.	.	16.000	23.000
MAY	1.800	.620	.	.	.	.
JUN	1.900	.400 <T	.	.	.	.
JUL	1.100	.370 <T	.	.	.	.
AUG	1.100	.330 <T	.	.	.	.
SEP	1.900	.380 <T	.	.	.	.
OCT	2.300	.780	.	.	18.000	24.000
NOV	3.500	.580	.	.	19.000	23.000
DEC	2.000	.350 <T	.	.	15.000	20.000
MOLYBDENUM (UG/L)		DET'N LIMIT = 0.020		GUIDELINE = 500 (H)		
JAN	1.100	1.100	1.100	1.100	1.000	1.000
FEB	1.200	1.200	.	.	1.100	1.100
MAR	1.200	1.200	.	1.200	1.200	1.100
APR	1.200	1.200	.	.	1.200	1.100
MAY	1.300	1.200	.	.	.	.
JUN	1.300	1.200	.	.	.	.
JUL	1.100	1.300	.	.	.	.
AUG	1.100	1.100	.	.	.	.
SEP	1.100	1.200	.	.	.	.
OCT	1.400	1.300	.	.	1.200	1.300
NOV	1.200	1.300	.	.	1.200	1.100
DEC	1.200	1.300	.	.	1.200	1.200
NICKEL (UG/L)		DET'N LIMIT = 0.100		GUIDELINE = 50. (F3)		
JAN	4.100	4.200	4.700	4.400	8.200	4.000
FEB	.460 <T	.500 <T	.	.	3.800	.760 <T
MAR	.860 <T	.690 <T	.	.350 <T	3.100	.930 <T
APR	1.100 <T	1.200 <T	.	.	4.200	1.400 <T
MAY	.780 <T	.550 <T	.	.	.	.
JUN	BDL	.260 <T	.	.	.	.
JUL	BDL	BDL	.	.	.	.
AUG	.730 <T	.470 <T	.	.	.	.
SEP	1.300 <T	1.100 <T	.	.	.	.
OCT	1.300 <T	.600 <T	.	.	6.900	.500 <T
NOV	.720 <T	.660 <T	.	.	1.000 <T	.160 <T
DEC	1.400 <T	1.000 <T	.	.	5.000	1.600 <T
LEAD (UG/L)		DET'N LIMIT = 0.050		GUIDELINE = 50. (A1)		
JAN	.430	.130 <T	8.200	1.700	20.000	.660
FEB	.210	.080 <T	.	.	24.000	.470
MAR	.270	.290	.	1.200	21.000	.600
APR	.210	.090 <T	.	.	22.000	.620

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE						
	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
MAY	.240	.620	.	.	.	.
JUN	.210	.550	.	.	.	.
JUL	.310	.040 <T	.	.	.	.
AUG	.280	.150 <T	.	.	.	.
SEP	.320	.400	.	.	.	.
OCT	.200 <T	.240	.	.	13.000	.640
NOV	.500	.330	.	.	4.000	.790
DEC	.230	.320	.	.	12.000	.700
ANTIMONY (UG/L)		DET'N LIMIT = .050		GUIDELINE = 146. (D4)		
JAN	.230	.250	.270	.240	.540	.230
FEB	.270	.230	.	.	.710	.180 <T
MAR	.240	.220	.	.220	.560	.220
APR	.270	.210	.	.	.650	.200 <T
MAY	.230	.220	.	.	.	.
JUN	.190 <T	.270	.	.	.	.
JUL	.250	.250	.	.	.	.
AUG	.570	.500	.	.	.	.
SEP	.690	.630	.	.	.	.
OCT	.640	.570	.	.	.820	.630
NOV	.650	.590	.	.	.720	.630
DEC	.360	.470	.	.	.630	.440
SELENIUM (UG/L)		DET'N LIMIT = 0.200		GUIDELINE = 10. (A1)		
JAN	BDL	BDL	.770 <T	.820 <T	.820 <T	.840 <T
FEB	.510 <T	1.400 <T	.	.	1.500 <T	1.100 <T
MAR	.450 <T	1.500 <T	.	1.200 <T	1.100 <T	1.200 <T
APR	.960 <T	1.700 <T	.	.	1.000 <T	2.000 <T
MAY	BDL	BDL	.	.	.	.
JUN	BDL	.250 <T	.	.	.	.
JUL	BDL	BDL	.	.	.	.
AUG	BDL	.580 <T	.	.	.	.
SEP	.240 <T	.680 <T	.	.	.	.
OCT	BDL	3.200 <T	.	.	4.000 <T	4.200 <T
NOV	2.000 <T	2.900 <T	.	.	3.900 <T	4.400 <T
DEC	1.100 <T	2.500 <T	.	.	2.500 <T	2.200 <T
STRONTIUM (UG/L)		DET'N LIMIT = .050		GUIDELINE = 2000.(H)		
JAN	170.000	170.000	180.000	170.000	190.000	170.000
FEB	180.000	180.000	.	.	200.000	190.000
MAR	180.000	180.000	.	180.000	200.000	190.000
APR	190.000	180.000	.	.	200.000	190.000
MAY	190.000	190.000	.	.	.	.

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
JUN	190.000	190.000	.	.	.	.
JUL	170.000	170.000	.	.	.	.
AUG	170.000	170.000	.	.	.	.
SEP	190.000	190.000	.	.	.	.
OCT	180.000	180.000	.	.	170.000	170.000
NOV	180.000	180.000	.	.	170.000	180.000
DEC	170.000	180.000	.	.	200.000	180.000
TITANIUM (UG/L)			DET'N LIMIT = .050		GUIDELINE = N/A	
JAN	4.200	3.400	3.600	3.300	3.600	3.300
FEB	5.700	5.000	.	.	5.200	5.100
MAR	3.700	3.300	.	4.000	4.100	3.600
APR	3.000	2.900	.	.	3.200	2.500
MAY	3.900	4.300	.	.	.	.
JUN	4.800	4.200	.	.	.	.
JUL	1.600 <T	1.800 <T	.	.	.	.
AUG	3.400	3.500	.	.	.	.
SEP	5.700	5.100	.	.	.	.
OCT	9.400	3.200	.	.	3.800	3.200
NOV	6.700	4.600	.	.	3.900	4.900
DEC	3.700	3.200	.	.	3.900	3.700
THALLIUM (UG/L)			DET'N LIMIT = .010		GUIDELINE = 13. (D4)	
JAN	.020 <T	.020 <T	.020 <T	.010 <T	.010 <T	BDL
FEB	.020 <T	.010 <T	.	.	.030 <T	.010 <T
MAR	BDL	.010 <T	.	.010 <T	.010 <T	.010 <T
APR	BDL	BDL	.	.	BDL	BDL
MAY	BDL	BDL	.	.	.	.
JUN	.020 <T	.020 <T	.	.	.	.
JUL	BDL	BDL	.	.	.	.
AUG	BDL	BDL	.	.	.	.
SEP	BDL	BDL	.	.	.	.
OCT	BDL	BDL	.	.	BDL	BDL
NOV	BDL	BDL	.	.	.030 <T	.020 <T
DEC	BDL	BDL	.	.	BDL	BDL
URANIUM (UG/L)			DET'N LIMIT = .020		GUIDELINE = 20. (A2)	
JAN	.390	.360	.350	.340	.400	.310
FEB	.340	.490	.	.	.430	.340
MAR	.320	.360	.	.330	.370	.300
APR	.330	.370	.	.	.400	.380
MAY	.290	.360	.	.	.	.
JUN	.320	.390	.	.	.	.

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE			SITE 1		SITE 2	
TYPE	RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
JUL	.420	.420	.	.	.	.
AUG	.300	.320	.	.	.	.
SEP	.310	.360	.	.	.	.
OCT	.330	.360	.	.	.320	.300
NOV	.310	.340	.	.	.340	.410
DEC	.330	.410	.	.	.390	.370
VANADIUM (UG/L)			DET'N LIMIT = .050		GUIDELINE = 100 (N)	
JAN	.390 <T	.430	.370 <T	.390 <T	.390 <T	.350 <T
FEB	.250 <T	.320 <T	.	.	.270 <T	.170 <T
MAR	.310 <T	.300 <T	.	.200 <T	.180 <T	.160 <T
APR	.280 <T	.310 <T	.	.	.200 <T	.240 <T
MAY	.220 <T	.320 <T	.	.	.	.
JUN	.290 <T	.350 <T	.	.	.	.
JUL	.340 <T	.470 <T	.	.	.	.
AUG	.220 <T	.360 <T	.	.	.	.
SEP	.290 <T	.400 <T	.	.	.	.
OCT	.270 <T	.400 <T	.	.	.270 <T	.260 <T
NOV	.370 <T	.450 <T	.	.	.280 <T	.310 <T
DEC	.340 <T	.450 <T	.	.	.290 <T	.310 <T
ZINC (UG/L)			DET'N LIMIT = .001		GUIDELINE = 5000. (A3)	
JAN	2.800	1.900	120.000	15.000	67.000	2.900
FEB	3.500	.970 <T	.	.	110.000	2.400
MAR	3.800	1.300	.	11.000	67.000	2.800
APR	3.500	1.500	.	.	72.000	2.800
MAY	6.000	3.100	.	.	.	.
JUN	2.400	2.100	.	.	.	.
JUL	3.200	1.300	.	.	.	.
AUG	4.900	1.400	.	.	.	.
SEP	7.300	2.400	.	.	.	.
OCT	4.000	2.100	.	.	62.000	3.600
NOV	4.700	1.800	.	.	19.000	3.300
DEC	3.500	1.500	.	.	42.000	3.000

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1985

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
PESTICIDES & PCB						
ALPHA BHC (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 700 (G)	
JAN	3.000 <T	3.000 <T	.	3.000 <T	.	2.000 <T
FEB	BDL	BDL	.	.	.	BDL
MAR	2.000 <T	3.000 <T	.	1.000 <T	.	2.000 <T
APR	3.000 <T	1.000 <T	.	.	.	2.000 <T
MAY	2.000 <T	BDL	.	.	.	.
JUN	BDL	BDL	.	.	.	.
JUL	2.000 <T	2.000 <T	.	.	.	.
AUG	2.000 <T	2.000 <T	.	.	.	.
SEP	2.000 <T	2.000 <T	.	.	.	.
OCT	2.000 <T	2.000 <T	.	.	.	3.000 <T
NOV	2.000 <T	2.000 <T	.	.	.	2.000 <T
DEC	BDL	BDL	.	.	.	BDL
LINDANE (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 4000 (A1)	
JAN	BDL	BDL	.	2.000 <T	.	1.000 <T
FEB	BDL	BDL	.	.	.	BDL
MAR	1.000 <T	1.000 <T	.	BDL	.	BDL
APR	BDL	BDL	.	.	.	BDL
MAY	BDL	BDL	.	.	.	.
JUN	BDL	BDL	.	.	.	.
JUL	BDL	BDL	.	.	.	.
AUG	BDL	BDL	.	.	.	.
SEP	BDL	1.000 <T	.	.	.	.
OCT	BDL	BDL	.	.	.	BDL
NOV	1.000 <T	1.000 <T	.	.	.	BDL
DEC	BDL	BDL	.	.	.	BDL
CYANAZINE (NG/L)			DET'N LIMIT = 100.00		GUIDELINE = 10000 (B3)	
DEC	BDL	BDL	.	.	.	BDL

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
PHENOLICS (UG/L)	PHENOLICS		DET'N LIMIT = 0.2		GUIDELINE = 2.00 (A3)	
JAN	.600 <T	.600 <T	.	.	.	.
FEB	.600 <T	.600 <T	.	.	.	.
MAR	.600 <T	.200 <T	.	.	.	.
APR	BDL	BDL	.	.	.	.
MAY	.600 <T	.600 <T	.	.	.	.
JUN	1.200	1.000 <T	.	.	.	.
JUL	.400 <T	.800 <T	.	.	.	.
AUG	.600 <T	1.600	.	.	.	.
SEP	1.400	1.000 <T	.	.	.	.
OCT	.400 <T	.400 <T	.	.	.	.
NOV	.200 <T	1.400	.	.	.	.
DEC	.600 <T	1.000	.	.	.	.

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
SPECIFIC PESTICIDES						
CYANAZINE (NG/L)			DET'N LIMIT = 100.00		GUIDELINE = 10000 (83)	
JAN	BDL	BDL	.	BDL	.	170.000 <T
FEB	BDL	BDL	.	.	.	BDL
MAR	BDL	BDL	.	BDL	.	BDL
APR	BDL	BDL	.	.	.	BDL
MAY	BDL	BDL	.	.	.	.
JUN	BDL	BDL	.	.	.	.
JUL	BDL	BDL	.	.	.	.
AUG	BDL	BDL	.	.	.	.
SEP	BDL	BDL	.	.	.	.
OCT	BDL	BDL	.	.	.	BDL
NOV	BDL	BDL	.	.	.	BDL

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE			SITE 1		SITE 2	
TYPE	RAW	TREATED	STANDING	FREE FLOW	STANDING	FREE FLOW
VOLATILES						
BENZENE (UG/L)			DET'N LIMIT = .050		GUIDELINE = 5.0 (B1)	
JAN	BDL	BDL	.	BDL	.	.150 <T
MAR	BDL	BDL	.	BDL	.	BDL
APR	BDL	BDL	.	.	.	BDL
MAY	BDL	BDL	.	.	.	.
JUN	BDL	.	.	.	.	.
JUL	BDL	BDL	.	.	.	.
AUG	BDL	BDL	.	.	.	.
SEP	BDL	BDL	.	.	.	.
OCT	BDL	BDL	.	.	.	BDL
NOV	BDL	BDL	.	.	.	BDL
DEC	BDL	BDL	.	.	.	BDL
TOLUENE (UG/L)			DET'N LIMIT = .050		GUIDELINE = 24.0 (B4)	
JAN	BDL	.150 UCS	.	.050 UCS	.	BDL
MAR	BDL	BDL	.	BDL	.	BDL
APR	BDL	.100 UCS	.	.	.	.050 UCS
MAY	BDL	BDL	.	.	.	.
JUN	BDL	.	.	.	.	.
JUL	BDL	.050 <T	.	.	.	.
AUG	BDL	BDL	.	.	.	.
SEP	BDL	BDL	.	.	.	.
OCT	BDL	BDL	.	.	.	BDL
NOV	BDL	BDL	.	.	.	BDL
DEC	.100 <T	.200 <T	.	.	.	BDL
ETHYLBENZENE (UG/L)			DET'N LIMIT = .050		GUIDELINE = 2.4 (B4)	
JAN	BDL	.100 <T	.	BDL	.	BDL
MAR	BDL	BDL	.	BDL	.	.100 <T
APR	BDL	BDL	.	.	.	.050 <T
MAY	.050 <T	BDL	.	.	.	.
JUN	BDL	.	.	.	.	.
JUL	BDL	.100 <T	.	.	.	.
AUG	BDL	BDL	.	.	.	.
SEP	.050 <T	BDL	.	.	.	.
OCT	.050 <T	BDL	.	.	.	BDL
NOV	BDL	.050 <T	.	.	.	BDL
DEC	.050 <T	.100 <T	.	.	.	BDL
STYRENE (UG/L)			DET'N LIMIT = .050		GUIDELINE = 46.5 (D2)	
OCT	.650 UCS	.150 <T	.	.	.	.200 <T

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE	RAW	TREATED	SITE 1		SITE 2	
TYPE			STANDING	FREE FLOW	STANDING	FREE FLOW
NOV	.050 <T	.300 <T	.	.	.	.250 <T
DEC	.100 <T	.300 <T	.	.	.	BDL
METHYLENE CHLORIDE (UG/L)		DET'N LIMIT = .500		GUIDELINE = 1750 (D3)		
JAN	BDL	2.000 <T	.	BDL	.	5.000 <T
MAR	BDL	BDL	.	BDL	.	BDL
APR	BDL	.500 SPS	.	.	.	.500 SPS
MAY	BDL	BDL	.	.	.	.
JUN	BDL	.	.	.	.	.
JUL	BDL	BDL	.	.	.	.
AUG	BDL	BDL	.	.	.	.
SEP	BDL	BDL	.	.	.	.
OCT	BDL	BDL	.	.	.	BDL
NOV	BDL	BDL	.	.	.	BDL
DEC	BDL	BDL	.	.	.	BDL
CHLOROFORM (UG/L)		DET'N LIMIT = .100		GUIDELINE = 350 (A1+)		
JAN	BDL	7.800	.	7.600	.	BDL
MAR	BDL	6.400	.	7.200	.	5.400
APR	BDL	7.100	.	.	.	7.100
MAY	BDL	14.200	.	.	.	.
JUN	BDL	.	.	.	.	.
JUL	BDL	8.400	.	.	.	.
AUG	.400 <T	7.600	.	.	.	.
SEP	.100 <T	18.000	.	.	.	.
OCT	.300 <T	5.700	.	.	.	5.600
NOV	BDL	6.500	.	.	.	6.100
DEC	.100 <T	6.800	.	.	.	7.400
DICHLOROBROMOMETHANE (UG/L)		DET'N LIMIT = .050		GUIDELINE = 350 (A1+)		
JAN	BDL	8.050	.	7.600	.	BDL
MAR	BDL	6.800	.	6.850	.	5.800
APR	BDL	7.500	.	.	.	7.100
MAY	BDL	11.300	.	.	.	.
JUN	BDL	.	.	.	.	.
JUL	BDL	7.500	.	.	.	.
AUG	.300 <T	7.550	.	.	.	.
SEP	.100 <T	13.900	.	.	.	.
OCT	.100 <T	5.500	.	.	.	6.400
NOV	BDL	5.800	.	.	.	5.500
DEC	BDL	7.100	.	.	.	6.950

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

SITE TYPE	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
CHLORODIBROMOMETHANE (UG/L) DET'N LIMIT = .100 GUIDELINE = 350 (A1+)						
JAN	BDL	7.300	.	4.900	.	BDL
MAR	BDL	5.300	.	6.200	.	4.200
APR	BDL	4.000	.	.	.	3.900
MAY	BDL	4.900	.	.	.	.
JUN	BDL	.	.	.	.	.
JUL	BDL	4.300	.	.	.	.
AUG	.400 <T	4.600	.	.	.	.
SEP	BDL	6.900	.	.	.	.
OCT	BDL	3.200	.	.	.	4.000
NOV	BDL	3.900	.	.	.	3.600
DEC	BDL	4.200	.	.	.	4.100
BROMOFORM (UG/L) DET'N LIMIT = .200 GUIDELINE = 350 (A1+)						
JAN	BDL	.400 <T	.	.400 <T	.	BDL
MAR	BDL	.600 <T	.	.400 <T	.	.400 <T
APR	BDL	.400 <T	.	.	.	.400 <T
MAY	BDL	.600 <T	.	.	.	.
JUN	BDL	.	.	.	.	.
JUL	BDL	.400 <T	.	.	.	.
AUG	BDL	.600 <T	.	.	.	.
SEP	BDL	.800 <T	.	.	.	.
OCT	BDL	.400 <T	.	.	.	.600 <T
NOV	BDL	.600 <T	.	.	.	.600 <T
DEC	BDL	.800 <T	.	.	.	.600 <T
1,2 DICHLOROBENZENE (UG/L) DET'N LIMIT = .050 GUIDELINE = 200 (B1)						
JAN	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	BDL	.	BDL
APR	BDL	BDL	.	.	.	BDL
MAY	BDL	BDL	.	.	.	.
JUN	BDL	.	.	.	.	.
JUL	.100 <T	BDL	.	.	.	.
AUG	BDL	BDL	.	.	.	.
SEP	BDL	BDL	.	.	.	.
OCT	BDL	BDL	.	.	.	BDL
NOV	BDL	BDL	.	.	.	BDL
DEC	BDL	BDL	.	.	.	BDL
TOTL TRIHALOMETHANES (UG/L) DET'N LIMIT = .500 GUIDELINE = 350 (A1)						
JAN	BDL	23.550	.	20.500	.	BDL
MAR	BDL	19.100	.	20.650	.	15.800

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM METRO TORONTO (R. C. HARRIS WTP) 1988

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
SITE TYPE	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
APR	BDL	19.000	.	.	.	18.500
MAY	BDL	31.000	.	.	.	.
JUN	BDL	.	.	.	.	.
JUL	BDL	20.600	.	.	.	.
AUG	1.100 <T	20.350	.	.	.	.
SEP	BDL	39.600	.	.	.	.
OCT	BDL	14.800	.	.	.	16.600
NOV	BDL	16.800	.	.	.	15.800
DEC	BDL	18.900	.	.	.	19.050

Table 6

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
BACTERIOLOGICAL			
STANDARD PLATE COUNT MEMBRANE FILTRATION	CT/ML	0	500/ML(A1)
P/A BOTTLE		0	0 (A1*)
TOTAL COLIFORM MEMBRANE FILTRATION	CT/100ML	0	5/100mL(A1)
TOTAL COLIFORM BACKGROUND MF	CT/100ML	0	N/A
CHLOROAROMATICS			
HEXACHLOROBUTADIENE	NG/L	1.000	450. (D4)
1,2,3-TRICHLOROBENZENE	NG/L	5.000	10000 (I)
1,2,3,4-TETRACHLOROBENZENE	NG/L	1.000	10000 (I)
1,2,3,5-TETRACHLOROBENZENE	NG/L	1.000	10000 (I)
1,2,4-TRICHLOROBENZENE	NG/L	5.000	10000 (I)
1,2,4,5-TETRACHLOROBENZENE	NG/L	1.000	38000 (D4)
1,3,5-TRICHLOROBENZENE	NG/L	5.000	10000 (D4)
HEXACHLOROBENZENE	NG/L	1.0	10. (C1)
HEXACHLOROETHANE	NG/L	1.000	1900. (D4)
OCTACHLOROSTYRENE	NG/L	1.000	N/A
PENTACHLOROBENZENE	NG/L	1.000	74000 (D4)
2,3,6-TRICHLOROTOLUENE	NG/L	5.000	N/A
2,4,5-TRICHLOROTOLUENE	NG/L	5.000	N/A
2,6,A-TRICHLOROTOLUENE	NG/L	5.000	N/A
CHLOROPHENOLS			
2,3,4-TRICHLOROPHENOL	NG/L	50.	N/A
2,3,4,5-TETRACHLOROPHENOL	NG/L	50.	N/A
2,3,5,6-TETRACHLOROPHENOL	NG/L	50.	N/A
2,4,5-TRICHLOROPHENOL	NG/L	50.	2600000 (D4)
2,4,6-TRICHLOROPHENOL	NG/L	50.	5000. (B1)
PENTACHLOROPHENOL	NG/L	50.	60000. (B1)
CHEMISTRY (FLD)			
FIELD COMBINED CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD FREE CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD TOTAL CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD PH	DMSNLESS	N/A	6.5-8.5(A4)
FIELD TEMPERATURE	^{o}C	N/A	<15 ^{o}C(A1)
FIELD TURBIDITY	FTU	N/A	1.0 (A1)
CHEMISTRY (LAB)			
ALKALINITY	MG/L	.200	30-500(A4)
CALCIUM	MG/L	.100	100. (F2)
CYANIDE	MG/L	.001	.20(A1)
CHLORIDE	MG/L	.200	250. (A3)
COLOUR	TCU	.5	5.0 (A3)
CONDUCTIVITY	UMHO/CM	1.	400. (F2)
FLUORIDE	MG/L	.01	2.4 (A1)
HARDNESS	MG/L	.50	80-100(A4)
MAGNESIUM	MG/L	.05	30. (F2)

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
NITRITE	MG/L	.001	1.0 (A1)
TOTAL NITRATES	MG/L	.02	10. (A1)
NITROGEN TOTAL KJELDAHL	MG/L	.02	N/A
PH	DIMENSLESS	N/A	6.5-8.5(A4)
PHOSPHORUS FIL REACT	MG/L	.0005	N/A
PHOSPHORUS TOTAL	MG/L	.002	.40(F2)
TOTAL SOLIDS	MG/L	1.	500. (A3)
TURBIDITY	FTU	.02	1.0 (A1)
METALS			
ALUMINUM	UG/L	.050	100. (A4)
ANTIMONY	UG/L	.050	146. (D4)
ARSENIC	UG/L	.050	50. (A1)
BARIUM	UG/L	.020	1000. (A1)
BORON	UG/L	.200	5000. (A1)
BERYLLIUM	UG/L	.010	0.20 (H)
CADMIUM	UG/L	.050	5.0 (A1)
COBALT	UG/L	.020	1000. (H)
CHROMIUM	UG/L	.100	50. (A1)
COPPER	UG/L	.100	1000. (A3)
IRON	UG/L	5.0	300. (A3)
MERCURY	UG/L	.01	1.0 (A1)
MANGANESE	UG/L	.050	50. (A3)
MOLYBDENUM	UG/L	.020	500. (H)
NICKEL	UG/L	.100	50. (F3)
LEAD	UG/L	.020	50. (A1)
SELENIUM	UG/L	.200	10. (A1)
SILVER	UG/L	.020	50. (A1)
STRONTIUM	UG/L	.100	2000. (H)
THALLIUM	UG/L	.010	13. (D4)
TITANIUM	UG/L	.100	N/A
URANIUM	UG/L	.020	20. (A2)
VANADIUM	UG/L	.020	100. (H)
ZINC	UG/L	.020	5000. (A3)
PHENOLICS			
PHENOLICS (UNFILTERED REACTIVE)	UG/L	.2	2.0 (A3)
PESTICIDES & PCB			
ALDRIN	NG/L	1.0	700. (A1)
AMETRINE	NG/L	50.	300000. (D3)
ATRAZINE	NG/L	50.	60000. (B3)
ALPHA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	700. (G)
BETA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	300. (G)
GAMMA HEXACHLOROCYCLOHEXANE(LINDANE)	NG/L	1.0	4000. (A1)
ALPHA CHLORDANE	NG/L	2.0	7000. (A1)
GAMMA CHLORDANE	NG/L	2.0	7000. (A1)
BLADEX	NG/L	100.	10000. (B3)
DIELDRIN	NG/L	2.0	700. (A1)
METHOXYCHLOR	NG/L	5.0	100000. (A1)
ENDOSULFAN 1 (THIODAN I)	NG/L	2.0	74000. (D4)
ENDOSULFAN 2 (THIODAN II)	NG/L	4.0	74000. (D4)
ENDRIN	NG/L	4.0	200. (A1)
ENDOSULFAN SULPHATE(THIODAN SULPHATE)	NG/L	4.0	N/A
HEPTACHLOR EPOXIDE	NG/L	1.0	3000. (A1)

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE	
HEPTACHLOR	NG/L	1.0	3000.	(A1)
METOLACHLOR	NG/L	500.	50000.	(B3)
MIREX	NG/L	5.0	N/A	
OXYCHLORDANE	NG/L	2.0	N/A	
O,P-DDT	NG/L	5.0	30000.	(A1)
PCB	NG/L	20.0	3000.	(A2)
O,P-DDD	NG/L	5.0	N/A	
PPDDE	NG/L	1.0	30000.	(A1)
PPDDT	NG/L	5.0	30000.	(A1)
ATRATONE	NG/L	50.	N/A	
ALACHLOR	NG/L	500.	35000.	(D2)
PROMETONE	NG/L	50.	52500.	(D3)
PROPAZINE	NG/L	50.	16000.	(D2)
PROMETRYNE	NG/L	50.	1000.	(B3)
SENCOR (METRIBUZIN)	NG/L	100.	80000.	(B2)
SIMAZINE	NG/L	50.	10000.	(B3)
POLYAROMATIC HYDROCARBONS				
PHENANTHRENE	NG/L	10.0	N/A	
ANTHRACENE	NG/L	1.0	N/A	
FLUORANTHENE	NG/L	20.0	42000.	(D4)
PYRENE	NG/L	20.0	N/A	
BENZO(A)ANTHRACENE	NG/L	20.0	N/A	
CHRYSENE	NG/L	50.0	N/A	
DIMETHYL BENZO(A)ANTHRACENE	NG/L	5.0	N/A	
BENZO(E)PYRENE	NG/L	50.0	N/A	
BENZO(B)FLUORANTHENE	NG/L	10.0	N/A	
PERYLENE	NG/L	10.0	N/A	
BENZO(K)FLUORANTHENE	NG/L	1.0	N/A	
BENZO(A)PYRENE	NG/L	5.0	10.	(B1)
BENZO(G,H,I)PERYLENE	NG/L	20.0	N/A	
DIBENZO(A,H)ANTHRACENE	NG/L	10.0	N/A	
INDENO(1,2,3-C,D)PYRENE	NG/L	20.0	N/A	
BENZO(B)CHRYSENE	NG/L	2.0	N/A	
CORONENE	NG/L	10.0	N/A	
SPECIFIC PESTICIDES				
TOXAPHENE	NG/L	N/A	5000.	(A1)
2,4,5-TRICHLOROBUTYRIC ACID (2,4,5-T)	NG/L	50.	280000.	(B1)
2,4-DICHLOROBUTYRIC ACID (2,4-D)	NG/L	100.	100000.	(A1)
2,4-DICHLOROPHENOXYBUTYRIC ACID	NG/L	200.	18000.	(B3)
2,4-D PROPIONIC ACID	NG/L	100.	N/A	
DICAMBA	NG/L	100.	87000.	(B3)
PICHLORAM	NG/L	100.	2450000.	(D3)
SILVEX (2,4,5-TP)	NG/L	50.	10000.	(A1)
DIAZINON	NG/L	20.	14000.	(A1)
DICHLORVOS	NG/L	20.	N/A	
DURSBAN	NG/L	20.	N/A	
ETHION	NG/L	20.	35000.	(G)
GUTHION	NG/L	N/A	N/A	
MALATHION	NG/L	20.	160000.	(G)
MEVINPHOS	NG/L	20.	N/A	
METHYL PARATHION	NG/L	50.	7000.	(B3)
METHYLTRITHION	NG/L	20.	N/A	
PARATHION	NG/L	20.	35000.	(B1)

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
PHORATE (THIMET)	MG/L	20.	35. (D2)
RELDAN	MG/L	20.	N/A
RONNEL	MG/L	20.	N/A
AMINOCARB	MG/L	N/A	N/A
BENOMYL	MG/L	N/A	N/A
BUX (METALKAMATE)	MG/L	2000.	N/A
CARBOFURAN	MG/L	2000.	18000. (D3)
CICP (CHLORPROPHAM)	MG/L	2000.	350000. (G)
DIALLATE	MG/L	2000.	30000. (H)
EPTAM	MG/L	2000.	N/A
IPC	MG/L	2000.	N/A
PROPOXUR (BAYGON)	MG/L	2000.	90000. (G)
SEVIN (CARBARYL)	MG/L	200.	70000. (A1)
SUTAN (BUTYLATE)	MG/L	2000.	245000. (D3)
VOLATILES			
BENZENE	UG/L	.050	5.0 (B1)
TOLUENE	UG/L	.050	24.0 (B4)
ETHYLBENZENE	UG/L	.050	2.4 (B4)
PARA-XYLENE	UG/L	.100	300. (B4)
META-XYLENE	UG/L	.100	300. (B4)
ORTHO-XYLENE	UG/L	.050	300. (B4)
1,1-DICHLOROETHYLENE	UG/L	.100	7.0 (D1)
ETHLYENE DIBROMIDE	UG/L	.05	50. (G)
METHYLENE CHLORIDE	UG/L	.500	1750. (D3)
TRANS-1,2-DICHLOROETHYLENE	UG/L	.100	350. (D3)
1,1-DICHLOROETHANE	UG/L	.100	N/A
CHLOROFORM	UG/L	.100	350. (A1+)
1,1,1-TRICHLOROETHANE	UG/L	.020	200. (D1)
1,2-DICHLOROETHANE	UG/L	.050	5.0 (D1)
CARBON TETRACHLORIDE	UG/L	.200	5.0 (D1)
1,2-DICHLOROPROPANE	UG/L	.050	10.0 (G)
TRICHLOROETHYLENE	UG/L	.100	5.0 (D1)
DICHLOROBROMOMETHANE	UG/L	.050	350. (A1+)
1,1,2-TRICHLOROETHANE	UG/L	.050	.60(D4)
CHLORODIBROMOMETHANE	UG/L	.100	350. (A1+)
TETRACHLOROETHYLENE	UG/L	.050	10.0 (C2)
BROMOFORM	UG/L	.200	350. (A1+)
1,1,2,2-TETRACHLOROETHANE	UG/L	.050	0.17(D4)
CHLOROBENZENE	UG/L	.100	1510. (D3)
1,4-DICHLOROBENZENE	UG/L	.100	5.0 (B1)
1,3-DICHLOROBENZENE	UG/L	.100	130. (G)
1,2-DICHLOROBENZENE	UG/L	.050	200. (B1)
TRIFLUOROCHLOROTOLUENE	UG/L	.100	N/A
TOTAL TRIHALOMETHANES	UG/L	.500	350. (A1)
STYRENE	UG/L	.05	46.5 (D2)